

Toolkit for Evaluating Alignment of Instructional and Assessment Materials to the Common Core State Standards

Instructional Materials Evaluation Tool (IMET)

For evaluating alignment of a comprehensive textbook or textbook series.

EQulP Tools

EQulP Rubrics for Lessons and Units

EQulP Student Work Protocol

Assessment Evaluation Tool (AET)

For evaluating alignment of grade or course-level assessment materials.

Assessment Passage & Item Quality Criteria Checklists

For evaluating the alignment of individual assessment passages, items and tasks.

Additional Resources for Evaluating Alignment of Instructional Materials

Appendix: Publisher's Criteria for the Common Core State Standards

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Section 1

Introduction

Introduction

The Common Core State Standards (CCSS) are a set of academic standards in mathematics and English language arts/literacy that are grounded in evidence and designed to ensure that all students have the academic knowledge and skills they need in these core subjects to succeed after high school. The CCSS were developed in a state-led process under the leadership of governors and chief state school officers and participation from 48 states. The process included the involvement of state departments of education, districts, teachers, community leaders, experts in a wide array of fields and professional educator organizations.

A good place to begin to understand the CCSS is through a study of the standards themselves and the key instructional shifts required in each discipline. In English language arts/literacy, students will be exposed to a balance of literary and informational texts to build a growing base of knowledge and will be expected to cite evidence from within the texts in order to answer questions and develop written or verbal responses. Students will also be expected to develop facility with academic language and read texts that increase in complexity as they progress so that all students are ready for the demands of college- and career-level reading no later than the end of high school. The instructional shifts in English language arts/literacy are as follows:¹

1. **Complexity:** Regular practice with complex text and its academic language
2. **Evidence:** Reading, writing, and speaking grounded in evidence from text, both literary and informational
3. **Knowledge:** Building knowledge through content-rich non-fiction

Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics.² These principles are meant to fuel greater achievement in a deep and rigorous curriculum, one in which students acquire conceptual understanding, procedural skill and fluency, and the ability to apply mathematics to solve problems. Thus, the instructional shifts in mathematics are as follows:³

1. **Focus** strongly where the Standards focus
2. **Coherence:** Think across grades and link to major topics within the grade
3. **Rigor:** In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

To ensure that all students are able to meet these high expectations, educators need access to high-quality and well-aligned instructional and assessment materials. In support of the work being done by both educators and developers to meet this need, Achieve, the Council of Chief State School Officers and Student Achievement Partners have developed this Toolkit for Evaluation Alignment of Instructional and Assessment Materials. The purpose of the Toolkit is to catalyze the impact that the CCSS can have on student achievement by increasing the prevalence of CCSS-aligned, high-quality instructional and assessment materials.

1. For more information about the shifts in English language arts/literacy, see achievethecore.org/elalitshifts

2. For some of the sources of evidence consulted during the standards development process, see pp 91-93 of CCSSM.

3. For more information about the shifts in mathematics, see achievethecore.org/mathshifts

Section 2

Instructional Materials Evaluation Tool (IMET)

- 6** ELA/Literacy, Grades K–2
- 61** ELA/Literacy, Grades 3–12
- 118** Mathematics, Grades K–8
- 159** Mathematics, High School

Instructional Materials Evaluation Tool (IMET)

ELA/Literacy, K-2

Instructional Materials Evaluation Tool

ELA/Literacy, Grades K-2

What Are the Purposes of the IMET?

This ELA/Literacy IMET is designed to help educators determine whether or not instructional materials are aligned to the Shifts and major features of the Common Core State Standards (CCSS). The substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-english-language-arts/>) at the heart of the Common Core State Standards are:

- **Complexity:** Regular practice with complex text and its academic language
- **Evidence:** Reading, writing, and speaking grounded in evidence from text, both literary and informational
- **Knowledge:** Building knowledge through content-rich non-fiction

The IMET draws directly from the following documents:

- Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects (<http://www.corestandards.org/ELA-Literacy/>)
- Publishers' Criteria for the Common Core State Standards in ELA/literacy grades K-2 (http://corestandards.org/assets/Publishers_Criteria_for_K-2.pdf)
- Supplement to Appendix A of the Common Core State Standards for ELA/Literacy: New Research on Text Complexity (http://www.corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf)

When to use the IMET

1. Purchasing materials: Many factors go into local purchasing decisions. Alignment to the Standards is a critical factor to

consider. This tool is designed to evaluate alignment of instructional materials to the Shifts and the major features of the CCSS. It also provides suggestions of additional indicators to consider in the materials evaluation and purchasing process.

2. Evaluating materials currently in use: The IMET can be used to analyze the degree of alignment of existing materials and help to highlight specific, concrete flaws in alignment. Even where materials and tools currently in use fail to meet one or more of these criteria, the pattern of failure is likely to be informative. States and districts can use the evaluation to create a thoughtful plan to modify or combine existing resources in such a way that students' actual learning experiences approach the complexity, evidence and knowledge-building of the Standards.
3. Developing materials: Those developing new materials locally can use this tool as guidance for creating aligned ELA/literacy curricula.

Please note this tool was designed for evaluating comprehensive curricula (including any supplemental or ancillary materials), but it was not designed for the evaluation of standalone supplemental materials.

Who Uses the IMET?

Evaluating instructional materials requires both subject matter and pedagogical expertise. Evaluators should be well versed in the Standards (<http://www.corestandards.org/ELA-Literacy/>) for all grades in which materials are being evaluated. Evaluators also should be familiar with the substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-english-language-arts/>) of Complexity, Evidence and Knowledge that are listed above.

Getting Started

Prior to Evaluation

Assemble all of the materials necessary for the evaluation. In addition, each evaluator should have a reference copy of the Common Core State Standards for ELA/Literacy and the Publishers' Criteria for the Common Core State Standards in ELA/Literacy grades K – 2.

Before conducting the evaluation itself, it is important to develop a protocol for the evaluation process. The protocol should include having evaluators study the Publishers' Criteria and the IMET. It will also be helpful for evaluators to get a sense of each program overall before beginning the process.

Sections 1 – 3 below should be completed to produce a comprehensive picture of the strengths and weaknesses of the materials under evaluation. Information about areas in need of improvement or supplementation should be shared with internal and external stakeholders.

Navigating the Tool

Begin with Section 1: Non-Negotiable Alignment Criteria (p. 9)

- The Non-Negotiable Alignment Criteria must each be met in full for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Non-Negotiable Alignment Criterion has one or more metrics associated with it; every one of these metrics must be met in order for the criterion as a whole to be met.
- Examine the relevant materials and use evidence to rate the materials against each criterion and its associated metrics.

- Record and explain the evidence upon which the rating is based

Continue to Section 2: Alignment Criteria (p. 17)

- The Alignment Criteria must each be met for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Alignment Criterion has one or more metric associated with it; a specific number of these metrics must be met or partially met in order for the criterion as a whole to be met.
- Examine the materials in relation to these criteria, assigning each metric a point value. Rate each criterion as “Meets” or “Does Not Meet” based on the number of points assigned. The more points the materials receive on the Alignment Criteria, the better they are aligned.
- Record and explain the evidence upon which the rating is based.

Complete Section 3: Evaluation Summary (p. 58)

- Compile all of the results from Sections 1 and 2 to determine if the instructional materials are aligned to the Shifts and major features of the CCSS.

Proceed to Section 4: Indicators of Quality (p. 60)

- Indicators of Quality are important considerations that will help evaluators better understand the overall quality of instructional materials. These considerations are not for alignment to the CCSS, but they provide valuable information about additional curricula characteristics. Evaluators may want to add their own indicators to the examples provided.

Directions for Non-Negotiable 1

Complexity of Texts

Non-Negotiable 1: ELA/literacy texts have the appropriate level of complexity for the grade, according to both quantitative measures and qualitative analysis of text complexity—texts are worthy of student time and attention.

Intended for anchor texts read aloud by the teacher in grades K – 1. Anchor texts are texts designed to be the center of attention for development of reading comprehension. Evaluations of text complexity are only applicable to grade 2 student reading material. For student reading materials in grades K – 1 refer to the Alignment Criteria for Foundational Skills 4B and 4D.

Required Materials

- Teacher’s edition and student materials
- Appendix A pages 1 – 10 for more on the vital role text complexity plays in the CCSS (http://www.corestandards.org/assets/Appendix_A.pdf)
- Supplement to Appendix A: New Research on Text Complexity (http://www.corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf)

Rating this Criterion

Non-Negotiable Alignment Criteria are defined as the set of criteria that must be met in full for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each metric of a Non-Negotiable Alignment Criterion must be met in order for the criterion to be met.

1. Evaluate carefully how completely the submission meets each of the metrics for this Criterion below.
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, if any one of the metrics is rated as Does Not Meet, then rate the overall Non-Negotiable 1 as Does Not Meet. If all metrics are rated as Meets, then rate the overall Non-Negotiable 1 as Meets.

Non-Negotiable 1

Complexity of Texts

Metric

NN Metric 1A:

100% of anchor texts must be accompanied by specific evidence that they have been analyzed with at least one research-based quantitative measure. Read-aloud texts should measure within or above the grades 2 – 3 band. Second grade anchor texts should measure within the grades 2 – 3 band.

How to Find the Evidence

Look for a publisher-supplied list of all texts in the submission with their quantitative measures.

District conducts evaluation of all texts in the submission.

Look for other evidence that texts have been measured by a quantitative measure.

Evidence

Rating

Meets

Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Complexity of Texts

Metric

NN Metric 1B:

100% of texts must be accompanied by specific evidence that they have been analyzed for their qualitative features indicating a specific grade level placement.

How to Find the Evidence

Look for a publisher-supplied list of all texts in the submission with their qualitative measures.

District conducts evaluation of all texts in the submission.

Look for other evidence that texts have been qualitatively analyzed.

Evidence

Rating

Meets

Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Complexity of Texts

Non-Negotiable 1: ELA/literacy texts have the appropriate level of complexity for the grade, according to both quantitative measures and qualitative analysis of text complexity – texts are worthy of student time and attention.

Rating for Non-Negotiable 1

If both metrics were rated as Meets, then rate Non-Negotiable 1 as Meets. If one or more metrics were rated as Does Not Meet, then rate Non-Negotiable 1 as Does Not Meet.

Check the final rating. Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

- Meets
 Does Not Meet

Strengths/Weaknesses:

Before moving to Non-Negotiable 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 58.

Directions for Non-Negotiable 2

Text-Dependent and Text-Specific Questions

Non-Negotiable 2: At least 80% of all questions in the submission are high-quality text-dependent and text-specific questions. The overwhelming majority of these questions are text-specific and draw student attention to the text.

Related to texts read aloud by the teacher in grades K – 2 and student reading materials beginning in grade 2 only. For questions/tasks related to student reading materials in grades K – 1 refer to the Alignment Criterion for Foundational Skills.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set of ELA/Literacy Standards
- Tools for evaluating the quality of text-dependent questions (<http://achievethecore.org/page/710/text-dependent-question-resources>)

Rating this Criterion

Non-Negotiable Alignment Criteria are defined as the set of criteria that must be met in full for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each subcomponent of a Non-Negotiable Alignment Criterion must be met in order for the criterion to be met.

1. Evaluate carefully how completely the submission meets each of the Criteria below.
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, if any one of the metrics is rated as Does Not Meet, then rate the overall Non-Negotiable 2 as Does Not Meet. If all metrics are rated as Meets, then rate the overall Non-Negotiable 2 as Meets.

Non-Negotiable 2

Text-Dependent and Text-Specific Questions

Metric

NN Metric 2A:

Eighty percent of questions and tasks are text-dependent to reflect the requirements of Reading Standard 1 (by requiring use of textual evidence to support valid inferences from the text).

How to Find the Evidence

Analyze a large* sample set of questions from across the submission, including culminating tasks and extended response tasks, and evaluate them for text dependency/text specificity and require readers to produce evidence.

*Recommendation: analyze one in every four sets of questions and tasks completely to get a valid sample size.

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Text-Dependent and Text-Specific Questions

Metric

NN Metric 2B:

Questions and tasks accurately address the analytical thinking required by the Standards at each grade level. NOTE: while multiple Standards will be addressed with every text, not every Standard must be assessed with every text.

How to Find the Evidence

Look for publisher-produced alignment documentation of the standards addressed by specific questions and tasks.

Analyze the same large* sample set of questions from across the submission, including culminating tasks and extended response tasks and evaluate which Standard(s) each meets.

*Recommendation: analyze one in every four sets of questions and tasks completely to get a valid sample size.

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Text-Dependent and Text-Specific Questions

Non-Negotiable 2: At least 80% of all questions in the submission are high-quality text-dependent and text-specific questions. The overwhelming majority of these questions are text-specific and draw student attention to the text.

Rating for Non-Negotiable 2

If both metrics were rated as Meets, then rate Non-Negotiable 2 as Meets. If one or more metrics were rated as Does Not Meet, then rate Non-Negotiable 2 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

- Meets
 Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 1, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 58.

Now continue by evaluating the Alignment Criterion 1 for Range and Quality of Texts

Directions for Alignment Criterion 1

Range and Quality of Texts

Alignment Criterion 1: Materials must reflect the distribution of text types and genres required by the Standards.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set of ELA/Literacy Standards

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of at least 7 out of 10 points means that the materials have met this Alignment Criterion.
4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation Summary on page 58 before proceeding to Alignment Criterion 2. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 1

Range and Quality of Texts

Metric

AC Metric 1A:

Materials pay careful attention to providing a sequence or collection of texts that build knowledge systematically through reading, writing, listening and speaking about topics under study, particularly for texts read aloud by the teacher in grades K – 2 and student reading materials in grade 2.

How to Find the Evidence

Examine the table of contents at each grade level to see if the collection is carefully sequenced and organized with the aim of increasing knowledge on several topics of focused inquiry.

Other evidence as appropriate.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Range and Quality of Texts

Metric

AC Metric 1B:

Within a sequence or collection of texts, specific anchor texts of grade level complexity (keystone texts) are selected for their quality as being worthy of especially careful reading. This may be for texts read aloud by the teacher and for student reading materials in grade 2. Other texts in the collection can and should vary widely in complexity to accommodate a full range of student independent reading ability.

How to Find the Evidence

Evaluate sample lessons to ensure they call for careful reading through the instructions offered to teachers and students.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Range and Quality of Texts

Metric

AC Metric 1C:

In grades K – 2, literacy programs shift the balance of texts and instructional time to 50% high quality literature / 50% content-rich informational text.

How to Find the Evidence

Look for a list of all the texts selected for submission with this information clearly provided and summarized.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Range and Quality of Texts

Metric

AC Metric 1D:

Texts included in instructional materials include and reflect the text characteristics and genres that are specifically required by the Standards at each grade level.

How to Find the Evidence

Look for a list of all the texts selected for submission with this information provided.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Range and Quality of Texts

Metric

AC Metric 1E:

Student reading materials markedly increase the opportunity for regular independent reading of texts that develop foundational skills, build knowledge, and increase student ability with complex texts.

How to Find the Evidence

Examine a representative sample of texts or the description of the supplemental materials to evaluate.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Range and Quality of Texts

Alignment Criterion 1: Materials must reflect the distribution of text types and genres required by the Standards.

Points Assigned for Alignment Criterion 1

Materials must earn at least 7 out of 10 points to meet Alignment Criterion 1. If materials earn less than 7 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (10 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 58.

Directions for Alignment Criterion 2

Questions Support Student Learning

Alignment Criterion 2: Questions support students in building reading comprehension, in finding and producing the textual evidence to support their responses, and in developing grade level academic language.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set of ELA/Literacy Standards
- Tools for evaluating the quality of text dependent questions (<http://achievethecore.org/page/710/text-dependent-question-resources>)

4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation Summary on page 58 before proceeding to Alignment Criterion 3. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of at least 4 out of 6 points means that the materials have met this Alignment Criterion.

Alignment Criterion 2

Questions Support Student Learning

Metric

AC Metric 2A:

High-quality sequences of text-dependent questions can address any of the following: sustained attention to making meaning from the text, rereading to gain evidence and clarity, and the acquisition of foundational skills.

How to Find the Evidence

Analyze a large* sample of questions from different grade levels/sections of the program.

*Recommendation: analyze one in every four sets of questions and tasks completely to get a valid sample size

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Questions Support Student Learning

Metric

AC Metric 2B:

Questions and tasks support students in acquiring the academic language (vocabulary and syntax) prevalent in complex texts.

How to Find the Evidence

Analyze a large* sample of questions and tasks to see that there are regularly questions asking students to address the meaning of academic vocabulary and to unpack complex sentences.

*Recommendation: analyze one in every four sets of questions and tasks completely to get a valid sample size.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Questions Support Student Learning

Metric

AC Metric 2C:

Questions build to a deep understanding of the central ideas of the text.

How to Find the Evidence

Analyze a large sample* of questions and tasks to see they address the central ideas of the text. Take particular note to see if they support students' ability to address the culminating task.

*Recommendation: analyze one in every four sets of questions and tasks completely to get a valid sample size.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Questions Support Student Learning

Alignment Criterion 2: Questions support students in building reading comprehension, in finding and producing the textual evidence to support their responses, and in developing grade level academic language.

Points Assigned for Alignment Criterion 2

Materials must earn at least 4 out of 6 points to meet Alignment Criterion 2. If materials earn less than 4 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 3, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 58.

Directions for Alignment Criterion 3

Writing to Sources and Research

Alignment Criterion 3: Written tasks at all grade levels require students to confront the text directly, to draw on textual evidence, and to support valid inferences from the text.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set of ELA/Literacy Standards

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of at least 6 out of 8 points means that the materials have met this Alignment Criterion.
4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation Summary on page 58 before proceeding to Alignment Criterion 4. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 3

Writing to Sources and Research

Metric

AC Metric 3A:

Writing to sources is a key task. Students are asked in their writing to analyze and synthesize sources, as well as to present careful analysis, well-defended claims and clear information. Materials are organized to elicit responses to sources in age-appropriate ways (could include activities such as dictation, making pictures to express thoughts, etc., in addition to writing).

How to Find the Evidence

Examine a sampling (minimum 8 per grade) of the writing tasks for each section, listing any tasks or items that do not require writing to sources. Calculate a percentage of aligned tasks. For alignment, three-quarters of tasks should require writing to sources.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Writing to Sources and Research

Metric

AC Metric 3B:

Materials create prominent and varied opportunities for opinion, informative/explanatory and narrative writing

How to Find the Evidence

Examine the table of contents to see if they match up with this distribution. When the title does not clearly indicate what type of writing look at the assignment itself.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Writing to Sources and Research

Metric

AC Metric 3C:

Extensive practice with short, focused, grade appropriate research projects is provided.

Materials require students to engage in many short research projects annually.

How to Find the Evidence

Examine the table of contents to see the frequency of these assignments.

Alternately, examine the Index to see the frequency of “research” as a term. Spot check 1/4 of those page references to gauge frequency and quality of instructional guidance. Read the instructions to see they are in fact short*.

*Short research projects would be no more than a week.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Writing to Sources and Research

Alignment Criterion 3: Written tasks at all grade levels require students to confront the text directly, to draw on textual evidence, and to support valid inferences from the text.

Points Assigned for Alignment Criterion 3

Materials must earn at least 6 out of 8 points to meet Alignment Criterion 3. If materials earn less than 6 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (8 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 4, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 58.

Directions for Alignment Criterion 4

Foundational Skills

Alignment Criterion 4: Materials provide explicit and systematic instruction and diagnostic support in concepts of print, phonological awareness, word awareness, phonics and vocabulary, development, syntax, and fluency. These foundational skills are necessary and central components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines.

Required Materials

- Teacher’s edition and student materials
- Refer to the to the grade-level specific Reading Standards for Foundations Skills (<http://www.corestandards.org/ELA-Literacy/RF/introduction/>)

4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation Summary on page 58 before proceeding to Alignment Criterion 5. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of at least 6 out of 8 points means that the materials have met this Alignment Criterion.

Alignment Criterion 4

Foundational Skills

Metric

AC Metric 4A:

Submissions address grade level CCSS for foundational skills by providing instruction in concepts of print, phonological awareness, letter recognition, phonics, word recognition and reading fluency in a research-based and transparent progression.

How to Find the Evidence

Examine the table of contents to see if this matches up with the foundational standards for each of these grades.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Foundational Skills

Metric

AC Metric 4B:

Submissions include a variety of student reading material that allows for systematic, regular and frequent practice of all foundational skills.

How to Find the Evidence

Examine instructions, questions and tasks in relevant foundational and other sections to see if this is expected.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Foundational Skills

Metric

AC Metric 4C:

Materials provide regular practice in encoding (spelling) and decoding (reading) the sound-symbol relationships of English.

How to Find the Evidence

Examine the table of contents to see if this is addressed. Read the prefatory materials to see the rationale for how this is approached.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Foundational Skills

Metric

AC Metric 4D:

Materials guide students to read with purpose and understanding and to make frequent connections between acquisition of foundation skills and making meaning from reading.

How to Find the Evidence

Read instructions and prefatory material from throughout the submission to evaluate how well this is done.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Foundational Skills

Alignment Criterion 4: Materials provide explicit and systematic instruction and diagnostic support in concepts of print, phonological awareness, word awareness, phonics and vocabulary, development, syntax, and fluency. These foundational skills are necessary and central components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines.

Points Assigned for Alignment Criterion 4

Materials must earn at least 6 out of 8 points to meet Alignment Criterion 4. If materials earn less than 6 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (8 points possible)

- Meets
 Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 5, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 58.

Directions for Alignment Criterion 5

Language

Alignment Criterion 5: Materials must adequately address the Language Standards for the grade.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level Language Standards (<http://www.corestandards.org/ELA-Literacy/L/language-progressive-skills/>)

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of at least 4 out of 6 points means that the materials have met this Alignment Criterion.
4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation Summary on page 58 before proceeding to Alignment Criterion 6. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 5

Language

Metric

AC Metric 5A:

Materials address the grammar and language conventions specified by the Language Standards at each grade level.

How to Find the Evidence

Examine the sections addressing this to see if instructions include this.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 5

Language

Metric

AC Metric 5B:

Materials expect students to confront their own error patterns in usage and conventions and correct them in a grade-by-grade pathway that results in college and career readiness by 12th grade.

How to Find the Evidence

Examine the table of contents to determine if these are included.

Information might also be contained in prefatory materials.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 5

Language

Metric

AC Metric 5C:

Materials provide a mirror of real-world activities for student practice with natural language (e.g. mock interviews, presentations).

How to Find the Evidence

Examine the table of contents to determine if these are included.

Information might also be contained in prefatory materials.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 5

Language

Alignment Criterion 5: Materials must adequately address the Language standards for the grade.

Points Assigned for Alignment Criterion 5

Materials must earn at least 4 out of 6 points to meet Alignment Criterion 5. If materials earn less than 4 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ **Total (6 points possible)**

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 6, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 58.

Directions for Alignment Criterion 6

Speaking and Listening

Alignment Criterion 6: To be CCSS-aligned, speaking and listening must be integrated into lessons, items, and tasks. These must reflect a progression of communication skills as outlined in the Standards.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set Speaking and Listening Standards (<http://www.corestandards.org/ELA-Literacy/SL/introduction/>)

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of at least 7 out of 10 points means that the materials have met this Alignment Criterion.
4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation Summary on page 58 before proceeding to Alignment Criterion 7. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 6

Speaking and Listening

Metric

AC Metric 6A:

Materials demand that students engage effectively in a range of conversations and collaborations by expressing well-supported ideas clearly and building on others' ideas.

How to Find the Evidence

Examine the tasks and instructions in the relevant sections. Prefatory materials might also help you determine if this is emphasized.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Speaking and Listening

Metric

AC Metric 6B:

Materials develop active listening skills, asking relevant questions, and elaborating on remarks of others in a grade-appropriate way.

How to Find the Evidence

Examine the tasks and instructions in the relevant sections. Prefatory materials might also help you determine if this is emphasized.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Speaking and Listening

Metric

AC Metric 6C:

Materials require students to marshal evidence when speaking.

How to Find the Evidence

Examine the tasks and instructions in the relevant sections. Prefatory materials might also help you determine if this is emphasized.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Speaking and Listening

Metric

AC Metric 6D:

Materials build in frequent opportunities for discussion and, through directions and modeling, encourage students to use academic language in their speech.

How to Find the Evidence

Examine instructions and tasks in relevant sections to see if this is prevalent.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Speaking and Listening

Alignment Criterion 6: To be CCSS-aligned, speaking and listening must be integrated into lessons, items, and tasks. These must reflect a progression of communication skills as outlined in the Standards.

Points Assigned for Alignment Criterion 6

Materials must earn at least 7 out of 10 points to meet Alignment Criterion 6. If materials earn less than 7 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (10 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 7, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 58.

Directions for Alignment Criterion 7

Access to the Standards for All Students

Alignment Criterion 7: Materials must provide thoughtful supports/scaffolds to support all students in accessing the CCSS.

Because the Standards are for all students, alignment requires thoughtful support to ensure all students are able to meet the same Standards. Thus, materials must provide supports for English Language Learners and other special populations.

4. Lastly, record the rating Meets, Does Not Meet or is Not Applicable for this section in the Evaluation Summary on page 58. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Required Materials

- Teacher’s edition and student materials
- If the submission has formative assessments and supplemental support materials as separate documents, gather them prior to evaluating this critical Alignment Criterion.

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of at least 8 out of 10 points means that the materials have met this Alignment Criterion.

Alignment Criterion 7

Access to the Standards for All Students

Metric

AC Metric 7A:

Do the materials regularly provide all students, including those who read, write, speak or listen below grade level, with extensive opportunities to work with and meet grade level Standards?

How to Find the Evidence

Examine the tasks and instructions in the sample chapters from throughout and across grades. Prefatory materials might also help you determine publisher attention to supporting all students.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Access to the Standards for All Students

Metric

AC Metric 7B:

Do materials regularly include extensions and/or more advanced opportunities for students who read, write, speak or listen above grade level?

How to Find the Evidence

Examine the tasks and instructions in the sample chapters from throughout and across grades. Prefatory materials might also help you determine publisher attention to supporting all students.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Access to the Standards for All Students

Metric

AC Metric 7C:

Are there suggestions and materials for adapting instruction for varying student needs (e.g., alternative teaching approaches, pacing, instructional delivery options, suggestions for addressing common student difficulties, remediation strategies)?

How to Find the Evidence

Examine the support materials and teacher instructions in sample lessons. Guidance should be practical and straightforward to implement. All recommended supports should be contained in the submission and readily available.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Access to the Standards for All Students

Metric

AC Metric 7D:

Do materials regularly and systematically build in the time and resources required to allow teachers to guide all students to meet grade level Standards?

How to Find the Evidence

Evaluate teacher instructions in sample lessons to determine how systematically the materials provide these opportunities and guidance.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Access to the Standards for All Students

Metric

AC Metric 7E:

Do the materials regularly and systematically offer assessment opportunities that genuinely measure progress? Does this progress include gradual release of supporting scaffolds for students to measure their independent abilities?

How to Find the Evidence

Examine table of contents to see how assessment of student progress is handled. If there are supplemental materials that provide assessment, evaluate how closely linked they are to lessons and instruction in at least 5 samplings from across the year.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Access to the Standards for All Students

Alignment Criterion 7: Materials must provide thoughtful supports/scaffolds to support all students in accessing the CCSS.

Points Assigned for Alignment Criterion 7

Materials must earn at least 8 out of 10 points to meet Alignment Criterion 7. If materials earn less than 8 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

___ Total (10 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Move to the Evaluation Summary on the following page to record the final Meets or Does Not Meet rating.

IMET Evaluation Summary 1 of 2

Title of Submission: _____

Name of Evaluator(s): _____

Publisher: _____

Date of Evaluation: _____

Date of Publication: _____

Signature of Each Evaluator(s): _____

Non-Negotiable Criteria

Each Non-Negotiable must be met in order for the Non-Negotiable Alignment Criteria to be met overall.

Non-Negotiable 1: Complexity of Texts

- Meets
 Does Not Meet

Non-Negotiable 2: Text Dependence and Specific Questions

- Meets
 Does Not Meet

Non-Negotiables Overall

- Meets
 Does Not Meet

Alignment Criteria

Each Alignment Criterion must be met with a sufficient number of points in order for Alignment Criteria to be labeled as “Meets” overall. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 1: Range and Quality of Texts

Points: ____ of 10 possible.
(Materials must receive at least 7 of 10 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criterion 4: Foundational Skills

Points: ____ of 8 possible.
(Materials must receive at least 6 of 8 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criteria Overall

- Meets
 Does Not Meet

Alignment Criterion 2: Questions and Tasks

Points: ____ of 6 possible.
(Materials must receive at least 4 of 6 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criterion 5: Language

Points: ____ of 6 possible.
(Materials must receive at least 4 of 6 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criterion 3: Writing to Sources and Research

Points: ____ of 8 possible.
(Materials must receive at least 6 of 8 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criterion 6: Speaking and Listening

Points: ____ of 10 possible.
(Materials must receive at least 7 of 10 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criterion 7: Access to the Standards for All Students

Points: ____ of 10 possible.
(Materials must receive at least 8 of 10 points to align.)

- Meets N/A
 Does Not Meet

IMET Evaluation Summary 2 of 2

Title of Submission: _____

Name of Evaluator(s): _____

Publisher: _____

Date of Evaluation: _____

Date of Publication: _____

Signature of Each Evaluator(s): _____

Summary

If the materials meet both Non-Negotiables and relevant Alignment Criteria, they are aligned to the Shifts and major features of the CCSS.

Do the materials meet the Non-Negotiables and relevant Alignment Criteria?

Yes

No

What are the specific areas of strength and weakness based on this review?

Publishers or others modifying or developing assessments can use this information to make improvements and/or to remedy gaps in the alignment of assessment materials.

Indicators of Quality

Once an evaluation for alignment to the Shifts and major features of the CCSS has been conducted using Sections 1 – 3, it’s important to evaluate for overall quality and best practices. A starting list of Indicators of Quality is suggested below. States, districts and others evaluating instructional materials are encouraged to add to this list to ensure materials reflect local contexts.

Indicators: Usefulness, Design, Focus

Evidence

Rating (Y/N)

1. Do the student resources include ample easily implemented review and practice resources, clear directions and explanations, and correct labeling of reference aids (e.g., visuals, maps, etc.)?
2. Are the materials easy to use? Are they clearly laid out for students and teachers? Does every page of the submission add to student learning rather than distract from it? Are reading selections centrally located within the materials and obviously the center of focus?
3. Can the teacher and student reasonably complete the content presented within a regular school year and does the pacing of content allow for maximum student understanding? Do the materials provide clear guidance to teachers about the amount of time the lesson might reasonably take?
4. Do instructions allow for careful reading and rereading of content?
5. Do the materials contain clear statements and explanation of purpose, goals, and expected outcomes?

Instructional Materials Evaluation Tool (IMET)

ELA/Literacy, Grades 3–12

Instructional Materials Evaluation Tool

ELA/Literacy, Grades 3-12

What Are the Purposes of the IMET ?

This ELA/Literacy IMET is designed to help educators determine whether instructional materials are aligned to the Shifts and major features of the Common Core State Standards (CCSS). The substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-english-language-arts/>) at the heart of the Common Core State Standards are:

- **Complexity:** Regular practice with complex text and its academic language
- **Evidence:** Reading, writing, and speaking grounded in evidence from text, both literary and informational
- **Knowledge:** Building knowledge through content-rich non-fiction.

The IMET draws directly from the following documents:

- Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects (<http://www.corestandards.org/ELA-Literacy/>)
- Publishers' Criteria for the Common Core State Standards in ELA/literacy grades 3-12 (http://corestandards.org/assets/Publishers_Criteria_for_3-12.pdf)
- Supplement to Appendix A of the Common Core State Standards for ELA/Literacy: New Research on Text Complexity (http://www.corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf)

When to use the IMET

1. Purchasing materials: Many factors go into local purchasing decisions. Alignment to the Standards is a critical factor to

consider. This tool is designed to evaluate alignment of instructional materials to the Shifts and the major features of the CCSS. It also provides suggestions of additional indicators to consider in the materials evaluation and purchasing process.

2. Evaluating materials currently in use: The IMET can be used to analyze the degree of alignment of existing materials and help to highlight specific, concrete flaws in alignment. Even where materials and tools currently in use fail to meet one or more of these criteria, the pattern of failure is likely to be informative. States and districts can use the evaluation to create a thoughtful plan to modify or combine existing resources in such a way that students' actual learning experiences approach the complexity, evidence, and knowledge building of the Standards.
3. Developing materials: Those developing new materials locally can use this tool as guidance for creating aligned ELA/Literacy curricula.

Please note this tool was designed to evaluate comprehensive curricula (including any supplemental or ancillary materials), but it was not designed for the evaluation of standalone supplemental materials.

Who Uses the IMET?

Evaluating instructional materials requires both subject-matter and pedagogical expertise. Evaluators should be well versed in the Standards (<http://www.corestandards.org/ELA-Literacy/>) for all grades in which materials are being evaluated. Evaluators also should be familiar with the substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-english-language-arts/>) of Complexity, Evidence, and Knowledge that are listed above.

Getting Started

Prior to Evaluation

Assemble all of the materials necessary for the evaluation. In addition, each evaluator should have a reference copy of the Common Core State Standards for ELA/Literacy and the Publishers' Criteria for the Common Core State Standards in ELA/Literacy grades 3-12.

Before conducting the evaluation itself, it is important to develop a protocol for the evaluation process. The protocol should include having evaluators study the Publishers' Criteria and the IMET. It will also be helpful for evaluators to get a sense of each program overall before beginning the process.

Sections 1–3 below should be completed to produce a comprehensive picture of the strengths and weaknesses of the materials under evaluation. Information about areas in need of improvement or supplementation should be shared with internal and external stakeholders.

Navigating the Tool

Begin with Section 1: Non-Negotiable Alignment Criteria (p. 64)

- The Non-Negotiable Alignment Criteria must each be met in full for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Non-Negotiable Alignment Criterion has one or more metrics associated with it; every one of these metrics must be met in order for the criterion as a whole to be met.
- Examine the relevant materials and use evidence to rate the materials against each criterion and its associated metrics.
- Record and explain the evidence upon which the rating is based.

Continue to Section 2: Alignment Criteria (p. 72)

- The Alignment Criteria must each be met for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Alignment Criterion has one or more metric associated with it; a specific number of these metrics must be met or partially met in order for the criterion as a whole to be met.
- Examine the materials in relation to these criteria, assigning each metric a point value. Rate each criterion as “Meets” or “Does Not Meet” based on the number of points assigned. The more points the materials receive on the Alignment Criteria, the better they are aligned.
- Record and explain the evidence upon which the rating is based.

Complete Section 3: Evaluation Summary (p. 115)

- Compile all of the results from Sections 1 and 2 to determine if the instructional materials are aligned to the Shifts and major features of the CCSS.

Proceed to Section 4: Indicators of Quality (p. 117)

- Indicators of Quality are important considerations that will help evaluators better understand the overall quality of instructional materials. These considerations are not for alignment to the CCSS, but they provide valuable information about additional curricula characteristics. Evaluators may want to add their own indicators to the examples provided.

Directions for Non-Negotiable 1

Complexity of Texts

Non-Negotiable 1: ELA/literacy texts have the appropriate level of complexity for the grade, according to both quantitative measures and qualitative analysis of text complexity — texts are worthy of student time and attention.

Required Materials

- Teacher’s edition and student materials
- Appendix A pages 1-10 for more on the vital role text complexity plays in the CCSS (http://www.corestandards.org/assets/Appendix_A.pdf)
- Supplement to Appendix A: New Research on Text Complexity (http://www.corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf)

3. When the section is finished, if any one of the metrics is rated as Does Not Meet, then rate the overall Non-Negotiable 1 as Does Not Meet. If all metrics are rated as Meets, then rate the overall Non-Negotiable 1 as Meets.

Rating this Criterion

Non-Negotiable Alignment Criteria are defined as the set of criteria that must be met in full for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each metric of a Non-Negotiable Alignment Criterion must be met in order for the criterion to be met.

1. Evaluate carefully how completely the submission meets each of the metrics for this Criterion below.
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.

Non-Negotiable 1

Complexity of Texts

Metric

NN Metric 1A:

100% of texts must be accompanied by specific evidence that they have been analyzed with at least one research-based quantitative measure for grade band placement.

How to Find the Evidence

Look for a publisher-supplied list of all texts in the submission with their quantitative measures.

District conducts evaluation of all texts in the submission.

Other evidence that texts have been measured by a quantitative measure.

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Complexity of Texts

Metric

NN Metric 1B:

100% of texts must be accompanied by specific evidence that they have been analyzed for their qualitative features indicating a specific grade level placement.

How to Find the Evidence

Look for a publisher-supplied list of all texts in the submission with their qualitative measures.

District conducts evaluation of all texts in the submission.

Look for other evidence that texts have been qualitatively analyzed.

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Complexity of Texts

Non-Negotiable 1: Texts are worthy of student time and attention; they have the appropriate level of complexity for the grade, according to both quantitative and qualitative analyses of text complexity.

Rating for Non-Negotiable 1

If both metrics were rated as Meets, then rate Non-Negotiable 1 as Meets. If one or more metrics were rated as Does Not Meet, then rate Non-Negotiable 1 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

- Meets
 Does Not Meet

Strengths / Weaknesses:

Before moving to Non-Negotiable 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 115.

Directions for Non-Negotiable 2

Text-Dependent and Text-Specific Questions

Non-Negotiable 2: At least 80% of all questions in the submission are high-quality text-dependent and text-specific questions. The overwhelming majority of these questions are text-specific and draw student attention to the text.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set of ELA/Literacy Standards
- Tools for evaluating the quality of text dependent questions (<http://achievethecore.org/page/710/text-dependent-question-resources>)

3. When the section is finished, if any one of the metrics is rated as Does Not Meet, then rate the overall Non-Negotiable 2 as Does Not Meet. If all metrics are rated as Meets, then rate the overall Non-Negotiable 2 as Meets.

Rating this Criterion

Non-Negotiable Alignment Criteria are defined as the set of criteria that must be met in full for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each metric of a Non-Negotiable Alignment Criterion must be met in order for the criterion to be met.

1. Evaluate carefully how completely the submission meets each of the metrics for this Criterion below.
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.

Non-Negotiable 2

Text-Dependent and Text-Specific Questions

Metric

NN Metric 2A:

At least eighty percent of all questions and tasks should be text dependent to reflect the requirements of Reading Standard 1 (by requiring use of textual evidence to support valid inferences from the text).

How to Find the Evidence

Analyze a large* sample set of questions from across the submission, including culminating tasks and extended response tasks, and evaluate them for text dependency/text specificity and requiring readers to produce evidence.

*Recommendation: analyze one in every four sets of questions and tasks completely to get a valid sample size.

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Text-Dependent and Text-Specific Questions

Metric

NN Metric 2B:

Questions and tasks accurately address the analytical thinking required by the Standards at each grade level. NOTE: while multiple Standards will be addressed with every text, not every standard must be addressed with every text.

How to Find the Evidence

Look for publisher-produced alignment documentation of the Standards addressed by specific questions and tasks.

Analyze the same large* sample set of questions from across the submission, including culminating tasks and extended response tasks, and evaluate which Standard(s) each meets.

*Recommendation: analyze one in every four sets of questions and tasks completely to get a valid sample size.

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Text-Dependent and Text-Specific Questions

Non-Negotiable 2: At least 80% of all questions in the submission are high-quality text-dependent and text-specific questions. The overwhelming majority of these questions are text-specific and draw student attention to the text.

Rating for Non-Negotiable 2

If both metrics were rated as Meets, then rate Non-Negotiable 2 as Meets. If one or more metrics were rated as Does Not Meet, then rate Non-Negotiable 2 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

- Meets
- Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 1, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 115.

Now continue by evaluating the Alignment Criterion 1 for Range and Quality of Texts

Directions for Alignment Criterion 1

Range and Quality of Texts

Alignment Criterion 1: Materials reflect the distribution of text types and genres required by the Standards.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set of ELA/Literacy Standards

Rating this Criterion

1. Rate how well the submission meets each of the criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of 7 out of 10 points means that the materials have met this Alignment Criterion.
4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation Summary on page 115 before proceeding to Alignment Criterion 2. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 1

Range and Quality of Texts

Metric

AC Metric 1A:

Materials pay careful attention to providing a sequence or collection of texts that build knowledge systematically through reading, writing, listening, and speaking about topics under study.

How to Find the Evidence

Examine the table of contents at each grade level to see if the collection is carefully sequenced and organized with the aim of increasing knowledge on several topics of focused inquiry.

Other evidence as appropriate.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Range and Quality of Texts

Metric

AC Metric 1B:

Within a sequence or collection of texts, specific anchor texts of grade-level complexity (keystone texts) are selected for their quality as being worthy of especially careful reading.

How to Find the Evidence

Evaluate sample lessons to ensure they call for careful reading through the instructions offered to teachers and students.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Range and Quality of Texts

Metric

AC Metric 1C:

In grades 3–5, literacy programs shift the balance of texts and instructional time to 50% literature / 50% informational high-quality text. In grades 6–12 ELA materials include substantial attention to high quality nonfiction.

How to Find the Evidence

Look for a list of all the texts selected for submission with this information clearly provided and summarized.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Range and Quality of Texts

Metric

AC Metric 1D:

A large majority of texts included in instructional materials reflect the text characteristics and genres that are specifically required by the Standards at each grade level.

How to Find the Evidence

Look for a list of all the texts selected for submission with this information provided.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Range and Quality of Texts

Metric

AC Metric 1E:

Additional materials markedly increase the opportunity for regular independent reading of texts that appeal to students' interests to develop both knowledge and love of reading.

How to Find the Evidence

Examine a representative sample of texts or the description of the supplemental materials to evaluate.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Range and Quality of Texts

Alignment Criterion 1: Materials reflect the distribution of text types and genres required by the Standards.

Points Assigned for Alignment Criterion 1

Materials must earn at least 7 out of 10 points to meet Alignment Criterion 1. If materials earn less than 7 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (10 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 115.

Directions for Alignment Criterion 2

Questions and Tasks

Alignment Criterion 2: They support students in building reading comprehension, in finding and producing the textual evidence to support their responses, and in developing grade level academic language.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set of ELA/Literacy Standards
- Tools for evaluating the quality of text dependent questions (<http://achievethecore.org/page/710/text-dependent-question-resources>)

4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation Summary on page 115 before proceeding to Alignment Criterion 3. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of 4 out of 6 points means that the materials have met this Alignment Criterion.

Alignment Criterion 2

Questions and Tasks

Metric

AC Metric 2A:

High-quality sequences of text-dependent questions are prevalent and can address any of the following: sustained attention to making meaning from the text, rereading to gain evidence and clarity, and the acquisition of foundational skills.

How to Find the Evidence

Analyze a large* sample of questions from different grade levels/sections of the program.

*Recommendation: analyze one in every four sets of questions and tasks completely to get a valid sample size.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Questions and Tasks

Metric

AC Metric 2B:

Questions and tasks support students in unpacking the academic language (vocabulary and syntax) prevalent in complex texts.

How to Find the Evidence

Analyze a large* sample of questions and tasks to see that there are regularly questions asking students to address the meaning of academic vocabulary and to unpack complex sentences.

*Recommendation: analyze one in every four sets of questions and tasks completely to get a valid sample size.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Questions and Tasks

Metric

AC Metric 2C:

Questions build to a deep understanding of the central ideas of the text.

How to Find the Evidence

Analyze a large sample* of questions and tasks to see they address the central ideas of the text. Take particular note to see if they support students' ability to address the culminating task.

*Recommendation: analyze one in every four sets of questions and tasks completely to get a valid sample size.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Questions and Tasks

Alignment Criterion 2: They support students in building reading comprehension, in finding and producing the textual evidence to support their responses, and in developing grade level academic language.

Points Assigned for Alignment Criterion 2

Materials must earn at least 4 out of 6 points to meet Alignment Criterion 2. If materials earn less than 4 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 3, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 115.

Directions for Alignment Criterion 3

Writing to Sources and Research

Alignment Criterion 3: Written and oral tasks at all grade levels require students to confront the text directly, to draw on textual evidence, and to support valid inferences from the text.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set of ELA/Literacy Standards

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of 6 out of 8 points means that the materials have met this Alignment Criterion.
4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation on page 115 before Proceeding to Alignment Criterion 4. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 3

Writing to Sources and Research

Metric

AC Metric 3A:

Writing to sources is a key task. Students are asked in their writing to analyze and synthesize sources, as well as to present careful analysis, well-defended claims, and clear information.

How to Find the Evidence

Examine a sampling (minimum 8 per grade) of the writing tasks for each section, listing any tasks or items that do not require writing to sources. Calculate a percentage of aligned tasks. For alignment, three-quarters of tasks should require writing to sources.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Writing to Sources and Research

Metric

AC Metric 3B:

Materials place an increased focus on argument and informative writing in the following proportions. Alternately, they may reflect blended forms in similar proportions (e.g. exposition and persuasion):

Grades 3–5	exposition 35% persuasion 30% narrative 35%
Grades 6–8	exposition 35% argument 35% narrative 30%
High School	exposition 40% argument 40% narrative 20%

How to Find the Evidence

Examine the table of contents to see if they match up with this distribution. When the title does not clearly indicate what type of writing look at the assignment itself.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Writing to Sources and Research

Metric

AC Metric 3C:

Writing opportunities for students are prominent and varied.

How to Find the Evidence

Examine the table of contents to see this is the case.

Alternately, examine the Index to see if the terms narrative, informative/expository, and narrative appear in the appropriate percentages as the grade level would require.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Writing to Sources and Research

Metric

AC Metric 3D:

Extensive practice with short, focused research projects is provided. Materials require students to engage in many short research projects annually to enable students to develop the expertise needed to conduct research independently.

How to Find the Evidence

Examine the table of contents to see the frequency of these assignments.

Alternately, examine the Index to see the frequency of “research” as a term.

Spot check ¼ of those page references to gauge frequency and quality of instructional guidance.

Read the instructions to see they are in fact short.*

*Short research projects would be no more than a week.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Writing to Sources and Research

Alignment Criterion 3: Written and oral tasks at all grade levels require students to confront the text directly, to draw on textual evidence, and to support valid inferences from the text.

Points Assigned for Alignment Criterion 3

Materials must earn at least 6 out of 8 points to meet Alignment Criterion 3. If materials earn less than 6 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (8 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 4, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 115.

Directions for Alignment Criterion 4

Foundational Skills

Alignment Criterion 4: Materials provide explicit and systematic instruction and diagnostic support in phonics, vocabulary, development, syntax, and fluency. These foundational skills are necessary and central components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines.

This Criterion should be used for Grades 3-5 submissions only.

Required Materials

- Teacher’s edition and student materials
- Refer to the to the grade-level specific Reading Standards for Foundations Skills (<http://www.corestandards.org/ELA-Literacy/RF/introduction/>)

4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the summary sheet on page 115 before going on. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of 6 out of 8 points means that the materials have met this Alignment Criterion.

Alignment Criterion 4

Foundational Skills

Metric

AC Metric 4A:

Submissions address grade-level CCSS for foundational skills by providing instruction in phonics, word recognition, vocabulary, syntax, and reading fluency in a research-based and transparent progression.

How to Find the Evidence

Examine the table of contents to see if this matches up with the foundational Standards for each of these grades.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Foundational Skills

Metric

AC Metric 4B:

Materials guide students to read with purpose and understanding and to make frequent connections between acquisition of foundation skills and making meaning from reading.

How to Find the Evidence

Examine instructions, questions and tasks in relevant foundational and other sections to see if this is called for.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Foundational Skills

Metric

AC Metric 4C:

Opportunities are frequently built into the materials for students to achieve reading fluency in oral and silent reading, that is, to read on-level prose and poetry with accuracy, rate appropriate to the text, and expression.

How to Find the Evidence

Examine the table of contents to see if this is addressed. Read the prefatory materials to see the rationale for how this is approached.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Foundational Skills

Metric

AC Metric 4D:

Materials guide students to read grade-level text with purpose and understanding.

How to Find the Evidence

Read instructions and prefatory material from throughout the submission to evaluate how well this is done.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Foundational Skills

Alignment Criterion 4: Materials provide explicit and systematic instruction and diagnostic support in phonics, vocabulary, development, syntax, and fluency. These foundational skills are necessary and central components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines.

Points Assigned for Alignment Criterion 4

Materials must earn at least 6 out of 8 points to meet Alignment Criterion 4. If materials earn less than 6 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ **Total (8 points possible)**

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 5, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 115.

Directions for Alignment Criterion 5

Language

Alignment Criteion 5: Materials adequately address the Language Standards for the grade.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set of Language Standards (<http://www.corestandards.org/ELA-Literacy/L/language-progressive-skills/>)

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of 4 out of 6 points means that the materials have met this Alignment Criterion.
4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the summary sheet on page 115 before going on. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 5

Language

Metric

AC Metric 5A:

Materials address the grammar and language conventions specified by the Language Standards at each grade level.

How to Find the Evidence

Examine the sections addressing this to see if instructions include this.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 5

Language

Metric

AC Metric 5B:

Materials expect students to confront their own error patterns in usage and conventions and correct them in a grade-by-grade pathway that results in college and career readiness by 12th grade.

How to Find the Evidence

Examine the table of contents to determine if these are included.

Information might also be contained in prefatory materials.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 5

Language

Metric

AC Metric 5C:

Materials provide a mirror of real-world activities for student practice with natural language (e.g. mock interviews, presentations).

How to Find the Evidence

Examine the table of contents to determine if these are included.

Information might also be contained in prefatory materials.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 5

Language

Alignment Criterion 5: Materials adequately address the Language Standards for the grade.

Points Assigned for Alignment Criterion 5

Materials must earn at least 4 out of 6 points to meet Alignment Criterion 5. If materials earn less than 4 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 6, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 115.

Directions for Alignment Criterion 6

Speaking and Listening

Alignment Criterion 6: To be CCSS-aligned, speaking and listening are integrated into lessons, questions and tasks. These reflect a progression of communication skills required for college and career readiness as outlined in the Standards.

Required Materials

- Teacher's edition and student materials
- Appropriate grade level set of Speaking and Listening Standards (<http://www.corestandards.org/ELA-Literacy/SL/introduction/>)

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.
3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of 7 out of 10 points means that the materials have met this Alignment Criterion.
4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation Summary on page 115 before proceeding to Alignment Criterion 7. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 6

Speaking and Listening

Metric

AC Metric 6A:

Texts used in speaking and listening questions and tasks meet the criteria for complexity, range, and quality of texts (Non-Negotiable and Alignment Criterion 1).

How to Find the Evidence

Examine the tasks and instructions in the relevant sections. Prefatory materials might also help you determine if this is emphasized.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Speaking and Listening

Metric

AC Metric 6B:

Materials demand that students engage effectively in a range of conversations and collaborations by expressing well-supported ideas clearly and building on others' ideas.

How to Find the Evidence

Examine the tasks and instructions in the relevant sections. Prefatory materials might also help you determine if this is emphasized.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Speaking and Listening

Metric

AC Metric 6C:

Materials develop active listening skills, such as taking notes on main ideas, asking relevant questions, and elaborating on remarks of others in a grade-appropriate way.

How to Find the Evidence

Examine the tasks and instructions in the relevant sections. Prefatory materials might also help you determine if this is emphasized.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Speaking and Listening

Metric

AC Metric 6D:

Materials require students to marshal evidence to orally present findings from research.

How to Find the Evidence

Examine the sections devoted to research to see if this is explicitly called for.

'Research' as a term should be listed in the Index.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Speaking and Listening

Metric

AC Metric 6E:

Materials build in frequent opportunities for discussion and, through directions and modeling, encourage students to use academic language in their speech.

How to Find the Evidence

Examine instructions and tasks in relevant sections to see if this is prevalent.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Speaking and Listening

Alignment Criterion 6: To be CCSS-aligned, speaking and listening are integrated into lessons, questions and tasks. These reflect a progression of communication skills required for college and career readiness as outlined in the Standards.

Points Assigned for Alignment Criterion 6

Materials must earn at least 7 out of 10 points to meet Alignment Criterion 6. If materials earn less than 7 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (10 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 7, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 115.

Directions for Alignment Criterion 7

Access to the Standards for All Students

Alignment Criterion 7: Materials must provide thoughtful supports/scaffolds to support all students in accessing the CCSS.

Because the Standards are for all students, alignment requires thoughtful support to ensure all students are able to meet the same Standards. Thus, materials must provide supports for English Language Learners and other special populations.

Required Materials

- Teacher’s edition and student materials
- Appropriate grade level set of ELA/Literacy Standards
- If the submission has formative assessments and supplemental support materials as separate documents, gather them prior to evaluating this critical Alignment Criterion.

Rating this Criterion

1. Rate how well the submission meets each of the Criteria below. Ratings are Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).
2. Provide specific examples of evidence in support of the rating, including pointing out specific gaps in the materials.

3. When the section is finished, add up the rating and enter it at the bottom of the section. A rating of 8 out of 10 points means that the materials have met this Alignment Criterion.
4. Lastly, record the rating Meets, Does Not Meet or Not Applicable for this section in the Evaluation Summary on page 115 before proceeding further. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 7

Access to the Standards for All Students

Metric

AC Metric 7A:

Do the materials regularly provide all students, including those who read, write, speak, or listen below grade level, with extensive opportunities to work with and meet grade level Standards?

How to Find the Evidence

Examine the tasks and instructions in the sample chapters from throughout and across grades. Prefatory materials might also help you determine publisher attention to supporting all students.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Access to the Standards for All Students

Metric

AC Metric 7B:

Do materials regularly include extensions and/or more advanced opportunities for students who read, write, speak, or listen above grade level?

How to Find the Evidence

Examine the tasks and instructions in the sample chapters from throughout and across grades. Prefatory materials might also help you determine publisher attention to supporting all students.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Access to the Standards for All Students

Metric

AC Metric 7C:

Are there suggestions and materials for adapting instruction for varying student needs (e.g., alternative teaching approaches, pacing, instructional delivery options, suggestions for addressing common student difficulties, remediation strategies)?

How to Find the Evidence

Examine the support materials and teacher instructions in sample lessons. Guidance should be practical and straightforward to implement. All recommended supports should be contained in the submission and readily available.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Access to the Standards for All Students

Metric

AC Metric 7D:

Do materials regularly and systematically build in the time and resources required to allow teachers to guide all students to meet grade level Standards?

How to Find the Evidence

Evaluate teacher instructions in sample lessons to determine how systematically the materials provide these opportunities and guidance.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Access to the Standards for All Students

Metric

AC Metric 7E:

Do the materials regularly and systematically offer assessment opportunities that genuinely measure progress? Does this progress include gradual release of supporting scaffolds for students to measure their independent abilities?

How to Find the Evidence

Examine the table of contents to see how assessment of student progress is handled. If there are supplemental materials that provide assessment, evaluate how closely linked they are to lessons and instruction in at least 5 samplings from across the year.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Access to the Standards for All Students

Alignment Criterion 7: Materials must provide thoughtful supports/scaffolds to support all students in accessing the CCSS.

Points Assigned for Alignment Criterion 7

Materials must earn at least 8 out of 10 points to meet Alignment Criterion 7. If materials earn less than 8 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

___ Total (10 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Move to the Evaluation Summary on the following page to record the final Meets or Does Not Meet rating.

IMET Evaluation Summary 1 of 2

Title of Submission: _____

Name of Evaluator(s): _____

Publisher: _____

Date of Evaluation: _____

Date of Publication: _____

Signature of Each Evaluator(s): _____

Non-Negotiable Criteria

Each Non-Negotiable must be met in order for the Non-Negotiable Alignment Criteria to be met overall.

Non-Negotiable 1: Complexity of Texts

- Meets
 Does Not Meet

Non-Negotiable 2: Text Dependence and Specific Questions

- Meets
 Does Not Meet

Non-Negotiables Overall

- Meets
 Does Not Meet

Alignment Criteria

Each Alignment Criterion must be met with a sufficient number of points in order for Alignment Criteria to be labeled as “Meets” overall. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 1: Range and Quality of Texts

Points: ____ of 10 possible.
(Materials must receive at least 7 of 10 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criterion 4: Foundational Skills

Points: ____ of 8 possible.
(Materials must receive at least 6 of 8 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criteria Overall

- Meets
 Does Not Meet

Alignment Criterion 2: Questions and Tasks

Points: ____ of 6 possible.
(Materials must receive at least 4 of 6 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criterion 5: Language

Points: ____ of 6 possible.
(Materials must receive at least 4 of 6 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criterion 3: Writing to Sources and Research

Points: ____ of 8 possible.
(Materials must receive at least 6 of 8 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criterion 6: Speaking and Listening

Points: ____ of 10 possible.
(Materials must receive at least 7 of 10 points to align.)

- Meets N/A
 Does Not Meet

Alignment Criterion 7: Access to the Standards for All Students

Points: ____ of 10 possible.
(Materials must receive at least 8 of 10 points to align.)

- Meets N/A
 Does Not Meet

IMET Evaluation Summary 2 of 2

Title of Submission: _____

Name of Evaluator(s): _____

Publisher: _____

Date of Evaluation: _____

Date of Publication: _____

Signature of Each Evaluator(s): _____

Summary

If the materials meet both Non-Negotiables and relevant Alignment Criteria, they are aligned to the Shifts and major features of the CCSS.

Do the materials meet both Non-Negotiables and the relevant Alignment Criteria?

Yes

No

What are the specific areas of strength and weakness based on this evaluation?

Publishers or others modifying or developing assessments can use this information to make improvements and/or to remedy gaps in the alignment of assessment materials.

Indicators of Superior Quality

Once an evaluation for alignment to the Shifts and major features of the CCSS has been conducted using Sections 1-3, it's important to evaluate for overall quality and best practices. A starting list of Indicators of Quality are suggested below. States, districts, and others evaluating instructional materials are encouraged to add to this list to ensure materials reflect local contexts.

Indicators: Usefulness, Design, Focus

Evidence

Rating (Y/N)

1. Do the student resources include ample review and practice resources, clear directions and explanations, and correct labeling of reference aids (e.g., visuals, maps, etc.)?

2. Are the materials easy to use? Are they clearly laid out for students and teachers? Does every page of the submission add to student learning rather than distract from it? Are reading selections centrally located within the materials and obviously the center of focus?

3. Can the teacher and student reasonably complete the content presented within a regular school year and does the pacing of content allow for maximum student understanding? Do the materials provide clear guidance to teachers about the amount of time the lesson might reasonably take?

4. Do instructions allow for careful reading and rereading of content?

5. Do the materials contain clear statements and explanation of purpose, goals, and expected outcomes?

Instructional Materials Evaluation Tool (IMET)

Mathematics, Grades K–8

Instructional Materials Evaluation Tool

Mathematics, Grades K-8

What Are the Purposes of the IMET?

This Math IMET is designed to help educators determine whether instructional materials are aligned to the Shifts and major features of the Common Core State Standards (CCSS). The substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-mathematics/>) at the heart of the Common Core State Standards are:

- **Focus** strongly where the Standards focus
- **Coherence:** Think across grades and link to major topics within the grade
- **Rigor:** In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

The IMET draws directly from the following documents:

- Common Core State Standards for Mathematics (www.corestandards.org/Math)
- Publishers' Criteria for the Common Core State Standards in Mathematics grade K-8 (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)

When to use the IMET

1. Purchasing materials: Many factors go into local purchasing decisions. Alignment to the Standards is a critical factor to consider. This tool is designed to evaluate alignment of instructional materials to the Shifts and the major features of the CCSS. It also provides suggestions of additional indicators to consider in the materials evaluation and purchasing process.

2. Evaluating materials currently in use: The IMET can be used to analyze the degree of alignment of existing materials and help to highlight specific, concrete flaws in alignment. Even where materials and tools currently in use fail to meet one or more of these criteria, the pattern of failure is likely to be informative. States and districts can use the evaluation to create a thoughtful plan to modify or combine existing resources in such a way that students' actual learning experiences approach the focus, coherence, and rigor of the Standards.
3. Developing programs: Those developing new programs can use this tool as guidance for creating aligned curricula.

Please note this tool was designed for evaluating comprehensive curricula (including any supplemental or ancillary materials), but it was not designed for the evaluation of standalone supplemental materials.

Who Uses the IMET?

Evaluating instructional materials requires both subject-matter and pedagogical expertise. Evaluators should be well versed in the Standards (www.corestandards.org/Math) for all grades in which materials are being evaluated. This includes understanding the Major Work of the grade (www.achievethecore.org/focus), the Supporting and Additional work, how the content fits into the progressions in the Standards (www.achievethecore.org/progressions), and the expectations of the Standards with respect to conceptual understanding, procedural skill and fluency, and application. Evaluators also should be familiar with the substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-mathematics/>) of Focus, Coherence and Rigor that are listed above.

Getting Started

Prior to Evaluation

Assemble all of the materials necessary for the evaluation. It is essential for evaluators to have materials for all grades covered by the program, as some criteria cannot be rated without having access to each grade. In addition, each evaluator should have a reference copy of the Common Core State Standards for Mathematics (CCSSM) and the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Before conducting the evaluation itself, it is important to develop a protocol for the evaluation process. The protocol should include having evaluators study the Publishers' Criteria and the IMET. It will also be helpful for evaluators to get a sense of each program overall before beginning the process. At a minimum, this would include reading the front matter of the text, looking at the table of contents and paging through multiple chapters.

Sections 1–3 below should be completed to produce a comprehensive picture of the strengths and weaknesses of the materials under evaluation. Information about areas in need of improvement or supplementation should be shared with internal and external stakeholders.

Navigating the Tool

Begin with Section 1: Non-Negotiable Alignment Criteria (p. 121)

- The Non-Negotiable Alignment Criteria must each be met in full for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Non-Negotiable Alignment Criterion has one or more metrics associated with it; every one of these metrics must be met in order for the criterion as a whole to be met.

- Examine the relevant materials and use evidence to rate the materials against each criterion and its associated metric(s).
- Record and explain the evidence upon which the rating is based.

Continue to Section 2: Alignment Criteria (p. 134)

- The Alignment Criteria must each be met for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Alignment Criterion has one or more metric associated with it; a specific number of these metrics must be met or partially met in order for the criterion as a whole to be met.
- Examine the materials in relation to these criteria, assigning each metric a point value. Rate the criterion as “Meets” or “Does Not Meet” based on the number of points assigned. The more points the materials receive on the Alignment Criteria, the better they are aligned.
- Record and explain the evidence upon which the rating is based.

Complete Section 3: Evaluation Summary (p. 154)

- Compile all of the results from Sections 1 and 2 to determine if the instructional materials are aligned to the Shifts and major features of the CCSS.

Proceed to Section 4: Indicators of Quality (p. 156)

- Indicators of Quality are important considerations that will help evaluators better understand the overall quality of instructional materials. These considerations are not criteria for alignment to the CCSS, but they provide valuable information about additional program characteristics. Evaluators may want to add their own indicators to the examples provided.

Directions for Non-Negotiable 1

Freedom from Obstacles to Focus

Non-Negotiable 1: Materials must reflect the content architecture of the Standards by not assessing the topics named* before the grade level where they first appear in the Standards.

The Standards foster students' progress to algebra by focusing strongly on arithmetic. Consistent with this focus, certain topics from outside of arithmetic appear only in later grades. Thus, to be aligned, materials must reflect the content architecture of the Standards by not assessing the topics named before the grade level where they first appear in the Standards.

Required Materials

- Common Core State Standards for Mathematics
(www.corestandards.org/wp-content/uploads/Math_Standards.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- From the materials being evaluated: teacher guides and all assessment components

Rating this Criterion

Non-Negotiable 1 is rated as Meets or Does Not Meet.

To rate Non-Negotiable 1, begin by rating Metric 1A. Since Metric 1A is the only metric for Non-Negotiable 1, the rating for Non-Negotiable 1 is the same as the rating for Metric 1A.

If Metric 1A is rated as Does Not Meet, include evidence of when the named topic(s) is/are assessed. If the metric is rated as Meets, list the grade(s) examined in the evaluation.

* In this criterion, "topics named" means the topics that are explicitly named in Metric 1A. No other topics should be added to the list in Metric 1A. [Note that other topics in the standards are addressed in criterion NN2.]

Non-Negotiable 1

Freedom from Obstacles to Focus

Metric

NN Metric 1A:

Materials reflect the basic architecture of the Standards by not assessing the listed topics* before the grade level indicated.

- Probability, including chance, likely outcomes, probability models. (Introduced in the CCSSM in grade 7)
- Statistical distributions, including center, variation, clumping, outliers, mean, median, mode, range, quartiles; and statistical association or trends, including two-way tables, bivariate measurement data, scatter plots, trend line, line of best fit, correlation. (Introduced in the CCSSM in grade 6)
- Similarity, congruence, or geometric transformations. (Introduced in the CCSSM in grade 8)
- Symmetry of shapes, including line/ reflection symmetry, rotational symmetry. (Introduced in the CCSSM in grade 4)

How to Find the Evidence

Evaluate the table of contents, all chapter tests, all unit tests, and other such assessment components (including rubrics).

For context, read Criterion #2 from the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013). NOTE: Grade alignments of other topics are addressed in Non-Negotiable 2, Focus and Coherence.)

Evidence

Rating

- Meets
- Does Not Meet

* In this metric, "listed topics" means the topics that are explicitly listed in Metric 1A. No other topics should be added to the list in Metric 1A. [Note that other topics in the standards are addressed in criterion NN2.]

Non-Negotiable 1

Freedom from Obstacles to Focus

Non-Negotiable 1: Materials must reflect the content architecture of the Standards by not assessing the topics named* before the grade level where they first appear in the Standards.

Rating for Non-Negotiable 1

If Metric 1A was rated as Meets, then rate Non-Negotiable 1 as Meets. If Metric 1A was rated as Does Not Meet, then rate Non-Negotiable 1 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

- Meets
 Does Not Meet

Strengths / Weaknesses:

* In this criterion, “topics named” means the topics that are explicitly named in Metric 1A. No other topics should be added to the list in Metric 1A. [Note that other topics in the standards are addressed in criterion NN2.]

Before moving to Non-Negotiable 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 154.

Directions for Non-Negotiable 2

Focus and Coherence

Non-Negotiable 2: Materials must focus coherently on the Major Work of the grade in a way that is consistent with the progressions in the Standards.

Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics (CCSSM, p. 3). Focus is necessary in order to fulfill the ambitious promise the states have made to their students by adopting the Standards: greater achievement at the college and career ready level; greater depth of understanding of mathematics; and a rich classroom environment in which reasoning, sense-making, applications, and a range of mathematical practices flourish. In simpler terms, a mile-wide, inch-deep curriculum translates to less time per topic. Less time means less depth and moving on without many students. Thus, materials must focus coherently on the Major Work of the grade in a way that is consistent with the progressions in the Standards.

Required Materials

- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)

- Focus by Grade Level for the grade being evaluated (www.achievethecore.org/focus)
- From the materials being evaluated: teacher guides, student texts and workbooks

Rating this Criterion

Non-Negotiable 2 is rated as Meets or Does Not Meet.

To rate Non-Negotiable 2, first rate metrics 2A–2H. Each of these eight metrics must be rated as Meets in order for Non-Negotiable 2 to be rated as Meets. Rate each metric 2A–2H as Meets or Does Not Meet/Insufficient Evidence. If the evidence examined shows that the Criterion is met, then mark the Criterion Meets. If the evidence examined shows that the Criterion is not met—or if there is insufficient evidence to make a determination—then mark the Criterion as Does Not Meet/Insufficient Evidence. Support all ratings with evidence.

Non-Negotiable 2

Focus and Coherence

Metric

NN Metric 2A:

In each grade K–8, students and teachers using the materials as designed devote the large majority of time to the Major Work of the grade.

How to Find the Evidence

Familiarize yourself with the Major Work of the grade being evaluated (see the Focus by Grade Level documents.)

Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, lessons, homework assignments, and assessments. (Evaluate both student and teacher materials.)

Consider time spent on the Major Work of the grade and judge qualitatively whether students and teachers using the materials as designed will devote the large majority of time to the Major Work of the grade.

For context, read Criterion #1 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Focus and Coherence

Metric

NN Metric 2B:

Supporting Work, where present, enhances focus and coherence simultaneously by also engaging students in the Major Work of the grade.

How to Find the Evidence

Familiarize yourself with the Major Work and Supporting Work of the grade being evaluated (see the Focus by Grade Level documents.)

Evaluate chapters and lessons that focus on Supporting Work. NOTE: Example of evaluating this Criterion might include looking at whether materials for K–5 generally treat data displays as an occasion for solving grade-level word problems using the four operations (e.g., see 3.MD.B.3); or whether materials for grade 7 take advantage of opportunities to use probability to support ratios, proportions, and percentages.

For context, read Criterion #3 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Focus and Coherence

Metric

NN Metric 2C:

Materials base content progressions on the grade-by-grade progressions in the Standards. Content from previous or future grades does not unduly interfere with or displace on-grade-level content.

How to Find the Evidence

Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, and lessons in both student and teacher materials. NOTE: In some cases it may be possible that aligned materials might address some aspects of a topic in a strategic way before or after the grade level in which the topic is central in the Standards' progressions; for example, a curriculum author might purposefully choose to explore adding fractions with unlike denominators in a way appropriate to grade four, recognizing that this work is not really required until the next grade. However, any such purposeful discrepancies in content progressions should enhance the required learning in each grade; not unduly interfere with or displace grade-level content; and be clearly aimed at helping students meet the Standards as written rather than effectively rewriting the progressions in the Standards. And in all cases, note that Non-Negotiable 1 must be met for materials to be aligned.

For context, read Criterion #5a in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Focus and Coherence

Metric

NN Metric 2D:

Materials give all students extensive work with on-grade-level problems.

How to Find the Evidence

Evaluate both student and teacher materials.

If the materials provide resources for differentiated learning, consider whether lower-performing students have opportunities to engage with grade-level problems. Also consider whether higher-performing students are given opportunities to learn current grade-level content in greater depth.

For context, read Criterion #5b in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Focus and Coherence

Metric

NN Metric 2E:

Materials relate on-grade-level concepts explicitly to prior knowledge from earlier grades.

How to Find the Evidence

Evaluate both student and teacher materials. NOTE: Examples of evaluating this Criterion might include looking at the way the materials extend basic ideas of place value across the decimal point; or the role that properties of operations play when the materials extend arithmetic beyond whole numbers to fractions, variables, and expressions. More generally, cluster headings in the Standards sometimes signal key moments where reorganizing and extending previous knowledge is important in order to accommodate new knowledge (e.g., see cluster headings that use the phrase “Apply and extend previous understanding”).

For context, read Criterion #5c in the Publishers’ Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Focus and Coherence

Metric

NN Metric 2F:

Review of material from previous grades is clearly identified as such to the teacher, and teacher and students can see what their specific responsibility is for the current year.

How to Find the Evidence

Evaluate the table of contents, but do not stop there; also evaluate units, chapters, lessons, homework assignments and assessments. (Evaluate both student and teacher materials.) Identify any content from previous grades and check whether it is identified as such.

For context, read Criterion #5a in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Focus and Coherence

Metric

NN Metric 2G:

Materials include learning objectives that are visibly shaped by CCSSM cluster headings.

How to Find the Evidence

Select several clusters from the Major Work in the grade being evaluated. Evaluate teacher and student materials in relation to these clusters.

For context, read Criterion #6a in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Focus and Coherence

Metric

NN Metric 2H:

Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important.

How to Find the Evidence

In the grade being evaluated, choose two or more clusters or two or more domains for which connections are natural and important.

Evaluate the units, chapters, and lessons that deal with the chosen topics, looking for problems and activities that serve to connect the chosen clusters or domains. NOTE: An example of evaluating this Criterion might include looking at whether problems in grade 4 sometimes or often involve students applying their developing computation skills (detailed in domain NBT) in the context of solving word problems (detailed in domain OA).

For context, read Criterion #6b in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Focus and Coherence

Non-Negotiable 2: Materials must focus coherently on the Major Work of the grade in a way that is consistent with the progressions in the Standards.

Rating for Non-Negotiable 2

If all Metrics 2A – 2H were rated as Meets, then rate Non-Negotiable 2 as Meets. If one or more Metric was rated Does Not Meet/Insufficient Evidence, then rate Non-Negotiable 2 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

- Meets
 Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 1, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 154.

Now continue by evaluating the Alignment Criterion 1 for Rigor and Balance

Directions for Alignment Criterion 1

Rigor and Balance

Alignment Criterion 1: Materials must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

The Standards set expectations for attention to all three aspects of rigor: conceptual understanding, procedural skill and fluency, and applications. Thus, materials must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

Required Materials

- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- Focus by Grade Level for the grade being evaluated (achievethecore.org/focus)
- Situation Types for the Operations in Word Problems (achievethecore.org/situation-types)
- From the materials being evaluated: teacher guides, student texts and workbooks

- Choose a cluster/Standard from the Major Work that is aligned to each aspect of rigor and use it to evaluate these metrics. It is most helpful if the same clusters/Standards are chosen for all of the programs being evaluated. (Guidance in choosing clusters/Standards is included in “How to Find the Evidence” below.)

Rating this Criterion

Alignment Criterion 1 is rated as Meets or Does Not Meet.

To rate Alignment Criterion 1, first rate metrics 1A, 1B, and 1C. Rate each metric as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). For each metric, guiding questions are provided to aid in gathering evidence.

Since there are three metrics, and each metric is worth up to 2 points, the maximum possible rating across all three metrics is 6 points. Ideally, aligned materials will earn all 6 points; materials are judged to have met Alignment Criterion 1 if the materials rate 5 or 6 points. This threshold recognizes that evaluators sometimes differ in how they assess features such as rigor and balance, while at the same time ensuring that no single metric can receive a rating of zero and be aligned to the Shifts and major features of the CCSSM.

Alignment Criterion 1

Rigor and Balance

Use the questions on this page to evaluate Metric 1A. On page 136, record evidence for each question and rate Metric 1A.

Metric

AC Metric 1A:

The materials support the development of students' conceptual understanding of key mathematical concepts, especially where called for in specific content Standards or cluster headings.

How to Find the Evidence

Select one or more cluster(s) or Standard(s) from the Major Work for the grade being evaluated that relate specifically conceptual understanding to use throughout the questions associated with this metric. NOTE: Some examples of clusters or Standards that call for conceptual understanding include: K.OA.A.1, (1.NBT.B, 1.NBT.C), (2.NBT.A, 2.NBT.B), (3.OA.A.1, 3.OA.A.2), 4.NF.A, (4.NBT.A, 4.NBT.B), 5.NF.B, (5.NBT.A, 5.NBT.B), 6.RP.A, 6.EE.A.3, 7.NS.A, 7.EE.A, 8.EE.B, 8.F.A, 8.G.A

Clusters or Standards grouped by parentheses are closely connected and could be analyzed together.

For context, read Criterion #4a in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Questions for Metric

Is conceptual understanding attended to thoroughly where the Standards set explicit expectations for understanding or interpreting? Evaluate lessons, chapter/unit assessments and homework assignments, paying attention to work aligned to Standards that explicitly call for understanding or interpreting. NOTE: Examples of evaluating this Criterion might include looking at how well the multi-digit addition and subtraction algorithms are developed and explained on the basis of place value and properties of operations; or how well the multi-digit multiplication and division algorithms are developed and explained on the basis of place value and properties of operations; or how well solving equations is presented and explained as a process of reasoning.

Do the materials feature high-quality conceptual problems and conceptual discussion questions? Evaluate lessons, chapter/unit assessments, and homework assignments. NOTE: Example of conceptual problems might include such questions as "Find a number greater than $\frac{1}{5}$ and less than $\frac{1}{4}$," or "If the divisor does not change and the dividend increases, what happens to the quotient?"

Do the materials feature opportunities to identify correspondences across mathematical representations? Evaluate lessons, chapter/unit assessments and homework assignments. NOTE: Examples of evaluating this Criterion might include looking at whether students are supported in identifying correspondences among: the verbal description of a situation, the diagrams that distill its mathematical features, and the equations that model it; or equivalent forms of numbers (e.g., 3 and $\frac{6}{2}$) and the number line; or rational number operations and representations of them via models such as the vector model; or the expression that defines a function and the graph that shows the relationship.

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1A:

The materials support the development of students' conceptual understanding of key mathematical concepts, especially where called for in specific content Standards or cluster headings.

Evidence

Is conceptual understanding attended to thoroughly where the Standards set explicit expectations for understanding or interpreting?

Do the materials feature high-quality conceptual problems and conceptual discussion questions?

Do the materials feature opportunities to identify correspondences across mathematical representations?

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Rigor and Balance

Use the questions on this page to evaluate Metric 1B. On page 138, record evidence for each question and rate Metric 1B.

Metric

AC Metric 1B:

The materials are designed so that students attain the fluencies and procedural skills required by the Standards.

How to Find the Evidence

Select one or more cluster(s) or Standard(s) from the Major Work for the grade being evaluated that relate specifically to fluency and procedural skill to use throughout the questions associated with this metric. NOTE: Some examples of Standards that call for procedural skill and fluency include: K.OA.A.5, 1.OA.C.6, 2.OA.B.2, 2.NBT.B.5, 3.OA.C.7, 3.NBT.A.2, 4.NBT.B.4, 5.NBT.B.5, 6.NS.B.2, and 6.NS.B.3, 6.EE.A, 7.NS.A, 7.EE.A.1, 7.EE.B.4a, 8.EE.C.7, 8.EE.C.8b

For context, read Criterion #4b in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Questions for Metric

Is progress toward fluency and procedural skill interwoven with students' developing conceptual understanding of the operations in question? Evaluate lessons, chapter/unit assessments, daily routines, and homework assignments for evidence that the development of fluency and procedural skill is supported by conceptual understanding.

Are purely procedural problems and exercises present that include cases in which opportunistic strategies are valuable and generic cases that require efficient algorithms present? Evaluate lessons, chapter/unit assessments, daily routines, and homework assignments. NOTE: Examples of problems in which opportunistic strategies are valuable might include the sum $698 + 240$ or the system $x + y = 1$, $2x + 2y = 3$. Examples of generic cases that require efficient algorithms might include the sum $8767 + 2286$ or the system $6y + x = \frac{3}{4}x + 3$, $-\frac{1}{2}x = 1 + 2y$.

Do the materials in grades K–6 provide repeated practice toward attainment of fluency Standards? Evaluate lessons, daily routines, and homework assignments for evidence of repeated practice toward attainment of the following K–6 Standards that set an explicit expectation of fluent (accurate and reasonably fast) computation: K.OA.A.5, 1.OA.C.6, 2.OA.B.2, 2.NBT.B.5, 3.OA.C.7, 3.NBT.A.2, 4.NBT.B.4, 5.NBT.B.5, 6.NS.B.2, 6.NS.B.3.

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1B:

The materials are designed so that students attain the fluencies and procedural skills required by the Standards.

Evidence

Is progress toward fluency and procedural skill interwoven with students' developing conceptual understanding of the operations in question?

Are purely procedural problems and exercises present that include cases in which opportunistic strategies are valuable and generic cases that require efficient algorithms present?

Do the materials in grades K–6 provide repeated practice toward attainment of fluency Standards?

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Rigor and Balance

Use the questions on this page to evaluate Metric 1C. On page 140, record evidence for each question and rate Metric 1C.

Metric

AC Metric 1C:

The materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the Major Work of each grade.

How to Find the Evidence

Select one or more cluster(s) or Standard(s) from the Major Work for the grade being evaluated that relate specifically application to use throughout the questions associated with this metric. NOTE: Some examples of clusters or Standards that call for application include: K.OA.A.2, 1.OA.A, 2.OA.A, 3.OA.A.3, 3.OA.D.8, 4.OA.A.3, 4.NF.B.3d, 4.NF.B.4c, 5.NF.B.6, 5.NF.B.7c, 6.RP.A.3, 6.NS.A.1, 6.EE.B.7, 6.EE.C.9, 7.RP.A, 7.NS.A.3, 7.EE.B.3, 8.EE.C.8c, 8.F.B

For context, read Criterion #4c in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Questions for Metric

Are there are single- and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem solving? Do the problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit? Evaluate lessons, chapter/unit assessments, and homework assignments.

Do application problems particularly stress applying the Major Work of the grade? Evaluate lessons, chapter/unit assessments, and homework assignments. NOTE: Examples of evaluating this Criterion might include looking at: how well, by the end of grade 2, students using the materials as designed can represent and solve a full range of one-step addition and subtraction word problems; or how well, by the end of grade 3, students using the materials as designed can represent and solve a full range of one-step multiplication and division word problems; or how well these basic situation types for each operation are carried coherently across the grades, (e.g., with fractions and algebraic expressions); or, in all grades, whether the problems connect concepts, Standards, and domains in ways that are natural and important. For a list of situation types for one-step addition, subtraction, multiplication, and division problems, see Situation Types for the Operations in Word Problems

Does modeling build slowly across K–8, with applications that are relatively simple in earlier grades and when students are encountering new content? In grades 6–8, do the problems begin to provide opportunities for students to make their own assumptions or simplifications in order to model a situation mathematically? Read Standard for Mathematical Practice 4, Model with Mathematics. Evaluate lessons, chapter/unit assessments, and homework assignments.

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1C:

The materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the Major Work of each grade.

Evidence

Are there are single- and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem solving? Do the problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit?

Do application problems particularly stress applying the Major Work of the grade?

Does modeling build slowly across K–8, with applications that are relatively simple in earlier grades and when students are encountering new content? In grades 6–8, do the problems begin to provide opportunities for students to make their own assumptions or simplifications in order to model a situation mathematically?

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Rigor and Balance

Alignment Criterion 1: Materials must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

Points Assigned for Alignment Criterion 1

Materials must earn at least 5 out of 6 points to meet this Alignment Criterion. If materials earn less than 5 out of 6 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 154.

Directions for Alignment Criterion 2

Standards for Mathematical Practice

Alignment Criterion 2: Materials must demonstrate authentic connections between content Standards and practice Standards.

The Standards require that designers of instructional materials connect the mathematical practices to mathematical content in instruction. Thus, materials must demonstrate authentic connections between content Standards and practice Standards.

Required Materials

- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- Focus by Grade Level for the grade being evaluated (www.achievethecore.org/focus)
- From the materials being evaluated: teacher guides, student texts and workbooks

Rating this Criterion

Alignment Criterion 2 is rated as Meets or Does Not Meet.

To rate Alignment Criterion 2, first rate metrics 2A, 2B, and 2C. Rate each metric as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). For each metric, guiding questions are provided to aid in gathering evidence.

Since there are three metrics, and each metric is worth up to 2 points, the maximum possible rating across all three metrics is 6 points. Ideally, aligned materials will earn all 6 points; materials are judged to have met Alignment Criterion 2 if the materials earn 5 or 6 points. This threshold recognizes that evaluators sometimes differ in how they assess features such as mathematical practices, while at the same time ensuring that no single metric can receive a rating of zero and be aligned to the Shifts and major features of the CCSSM.

Alignment Criterion 2

Standards for Mathematical Practice

Metric

AC Metric 2A:

Materials address the practice Standards in such a way as to enrich the Major Work of the grade; practices strengthen the focus on Major Work instead of detracting from it, in both teacher and student materials.

How to Find the Evidence

Familiarize yourself with the Major Work of the grade being evaluated (see the Focus by Grade Level documents.)

Evaluate teacher and student materials for evidence that the mathematical practices support and connect to the focus of the grade. NOTE: Examples of evaluating this Criterion might include looking at whether, in grades K–5, students using the materials are supported to look for and express regularity in repeated reasoning about the addition table, the multiplication table, the properties of operations, the relationship between addition and subtraction or multiplication and division, and the place value system; or whether, in grades 6–8, students using the materials are supported to look for and express regularity in repeated reasoning about proportional relationships and linear functions.

For context, read Criterion #8 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Standards for Mathematical Practice

Use the questions on this page to evaluate Metric 2B. On page 145, record evidence for each question and rate Metric 2B.

Metric

AC Metric 2B:

Materials attend to the full meaning of each practice Standard.

How to Find the Evidence

For context, read Criterion #7 and Criterion #9 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Questions for Metric

Over the course of any given year of instruction, is each mathematical practice Standard meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice Standard? Evaluate lessons, chapter/unit assessments, and homework assignments for evidence of each mathematical practice being meaningfully present in instruction.

Do the materials treat the practice Standards as developing across grades or grade bands? Are the practice Standards in early grades appropriately simple? Do they display an arc of growing sophistication across the grades? Evaluate lessons, chapter/unit assessments, and homework assignments.

Are there teacher-directed materials that explain the role of the practice Standards in the classroom and in students' mathematical development? Are alignments to practice Standards accurate? Evaluate teacher materials, paying attention to explanations of the role of the practice Standards in the classroom and in students' mathematical development. Evaluate documents aligning lessons to practice Standards for accuracy. NOTE: Examples to look for when evaluating this metric might include the following: a highly scaffolded problem should not be aligned to MP.1; or a problem that directs a student to use a calculator should not be aligned to MP.5; or a problem about merely extending a pattern should not be aligned to MP.8.

Alignment Criterion 2

Standards for Mathematical Practice

Metric

AC Metric 2B:

Materials attend to the full meaning of each practice Standard.

Evidence

Over the course of any given year of instruction, is each mathematical practice Standard meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice Standard?

Do the materials treat the practice Standards as developing across grades or grade bands? Are the practice Standards in early grades appropriately simple? Do they display an arc of growing sophistication across the grades?

Are there teacher-directed materials that explain the role of the practice Standards in the classroom and in students' mathematical development? Are alignments to practice Standards accurate?

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Standards for Mathematical Practice

Use the questions on this page to evaluate Metric 2C. On page 147, record evidence for each question and rate Metric 2C.

Metric

AC Metric 2C:

Materials support the Standards' emphasis on mathematical reasoning.

How to Find the Evidence

For context, read Criterion #10 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Questions for Metric

Do the materials support students in constructing viable arguments and critiquing the arguments of others concerning grade-level mathematics that is detailed in the content Standards? Read Standard for Mathematical Practice 3. Evaluate teacher and student materials to ensure that students are given opportunities to reason with grade-level mathematics.

Do the materials support students in producing not only answers and solutions, but also, in a grade-appropriate way, arguments, explanations, diagrams, mathematical models, etc., especially in the Major Work of the grade? Familiarize yourself with the Major Work of the grade being evaluated (see the Focus by Grade Level documents.) Evaluate teacher and student materials, to understand the types of work students are expected to produce.

Do materials explicitly attend to the specialized language of mathematics? Is the language of argument, problem solving, and mathematical explanations taught rather than assumed? Evaluate teacher and student materials, paying attention to how mathematical language is taught. NOTE: Examples of evaluating this Criterion might include looking at whether students are supported in: basing arguments on definitions; using the method of providing a counterexample; or recognizing that examples alone do not establish a general statement.

Alignment Criterion 2

Standards for Mathematical Practice

Metric

AC Metric 2C:

Materials support the Standards' emphasis on mathematical reasoning.

Evidence

Do the materials support students in constructing viable arguments and critiquing the arguments of others concerning grade-level mathematics that is detailed in the content Standards?

Do the materials support students in producing not only answers and solutions, but also, in a grade-appropriate way, arguments, explanations, diagrams, mathematical models, etc., especially in the Major Work of the grade?

Do materials explicitly attend to the specialized language of mathematics? Is the language of argument, problem solving, and mathematical explanations taught rather than assumed?

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Standards for Mathematical Practice

Alignment Criterion 2: Materials must demonstrate authentic connections between content Standards and practice Standards.

Points Assigned for Alignment Criterion 2

Materials must earn at least 5 out of 6 points to meet this Alignment Criterion. If materials earn less than 5 out of 6 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criteria 3, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 154.

Directions for Alignment Criterion 3

Access to the Standards for All Students

Alignment Criterion 3: Materials must provide supports for English Language Learners and other special populations.

Because Standards are for all students, alignment requires thoughtful support to ensure all students are able to meet the Standards. Thus, aligned materials must provide supports for English Language Learners and other special populations.

Required Materials

- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- From the materials being evaluated: teacher guides, student texts and workbooks

Rating this Criterion

Alignment Criterion 3 is rated as Meets or Does Not Meet.

To rate Alignment Criterion 3, first rate metrics 3A, 3B, and 3C. Rate

each metric as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).

Since there are three metrics, and each metric is worth up to 2 points, the maximum possible rating across all three metrics is 6 points. Ideally, aligned materials will earn all 6 points; materials are judged to have met Alignment Criterion 3 if the materials earn 5 or 6 points. This threshold recognizes that evaluators sometimes differ in how they assess features such as support for special population, while at the same time ensuring that no single metric can receive a rating of zero and be aligned to the Shifts and major features of the CCSSM.

Alignment Criterion 3

Access to the Standards for All Students

Metric

AC Metric 3A:

Support for English Language Learners and other special populations is thoughtful and helps those students meet the same Standards as all other students. The language in which problems are posed is carefully considered.

How to Find the Evidence

Evaluate teacher and student materials, paying attention to supports offered for special populations.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Access to the Standards for All Students

Metric

AC Metric 3B:

Materials provide appropriate level and type of scaffolding, differentiation, intervention, and support for a broad range of learners with gradual removal of supports, when needed, to allow students to demonstrate their mathematical understanding independently.

How to Find the Evidence

Evaluate teacher and student materials, paying attention to whether materials provide differentiation that will lead all learners to engage with on-grade-level content.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Access to the Standards for All Students

Metric

AC Metric 3C:

Design of lessons recommends and facilitates a mix of instructional approaches for a variety of learners such as using multiple representations (e.g., including models, using a range of questions, checking for understanding, flexible grouping, pair-share).

How to Find the Evidence

Evaluate teacher materials, noting instructional approaches suggested for whole class and differentiated lessons and activities.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Access to the Standards for All Students

Alignment Criterion 3: Materials must provide supports for English Language Learners and other special populations.

Points Assigned for Alignment Criterion 3

Materials must earn at least 5 out of 6 points to meet this Alignment Criterion. If materials earn less than 5 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

___ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Move to the Evaluation Summary on the following page to record the final Meets or Does Not Meet rating.

IMET Evaluation Summary 1 of 2

Program: _____

Name of Evaluator(s): _____

Publisher: _____

Date of Evaluation: _____

Date of Publication: _____

Signature of Each Evaluator(s): _____

Non-Negotiable Criteria

Each Non-Negotiable must be met in order for the Non-Negotiable Alignment Criteria to be met overall.

Non-Negotiable 1: Freedom from Obstacles to Focus

- Meets
- Does Not Meet

Non-Negotiable 2: Focus and Coherence

- Meets
- Does Not Meet

Non-Negotiables Overall

- Meets
- Does Not Meet

Alignment Criteria

Each Alignment Criterion must be met with a sufficient number of points in order for Alignment Criteria to be labeled as “Meets” overall. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 1: Rigor and Balance

Points: ____ of 6 possible.
(Materials must receive at least 5 of 6 points to align.)

- Meets
- Does Not Meet

Alignment Criterion 2: Standards for Mathematical Practice

Points: ____ of 6 possible.
(Materials must receive at least 5 of 6 points to align.)

- Meets
- Does Not Meet

Alignment Criterion 3: Access to Standards for All Learners

Points: ____ of 6 possible.
(Materials must receive at least 5 of 6 points to align.)

- Meets
- Does Not Meet

Alignment Criteria Overall

- Meets
- Does Not Meet

IMET Evaluation Summary 2 of 2

Program: _____

Name of Evaluator (s): _____

Publisher: _____

Date of Evaluation: _____

Date of Publication: _____

Signature of Each Evaluator (s): _____

Summary

If the materials meet both Non-Negotiables and relevant Alignment Criterion, they are aligned to the Shifts and major features of the CCSS.

Do the materials meet every Non-Negotiable and Alignment Criterion?

Yes

No

What are the specific areas of strength and weakness based on this evaluation?

Publishers or others modifying or developing assessments can use this information to make improvements and/or to remedy gaps in the alignment of assessment materials.

Indicators of Quality

Once an evaluation for alignment to the Shifts and major features of the CCSS has been conducted using Sections 1-3, it's important to evaluate for overall quality and best practices. A starting list of Indicators of Quality are suggested below. States, districts and others evaluating instructional materials are encouraged to add to this list to ensure materials reflect local contexts. For background information on some of the Indicators of Quality in this section, refer to pp.18–21 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Indicators	Evidence	Rating (Y/N)
1. Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.		
2. The underlying design of the materials includes both problems and exercises. (In solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery.) Each problem or exercise has a purpose. NOTE: This Criterion does not require that the problems and exercises be labeled as such.		
3. Design of assignments is not haphazard: exercises are given in intentional sequences in order to strengthen students' mathematical understanding.		

Indicators of Quality

Indicators

Evidence

Rating (Y/N)

4. There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.

5. Manipulatives suggested in the materials are faithful representations of the mathematical objects they represent and are connected to written methods.

6. Materials include a variety of curriculum-embedded assessments. Examples include pre-, formative, summative, and self-assessment resources.

7. Assessments contain aligned rubrics, answer keys, and scoring guidelines that provide sufficient guidance for interpreting student performance.

8. Materials assess student proficiency using methods that are accessible and unbiased, including the use of grade-level language in student prompts.

Indicators of Quality

Indicators

Evidence

Rating (Y/N)

9. Materials are carefully evaluated by qualified individuals, whose names are listed, in an effort to ensure freedom from mathematical errors and grade-level appropriateness.
10. The visual design supports students in engaging thoughtfully with the subject. Navigation through the text is clear.
11. The materials engage parents in appropriate ways. For example, homework assignments in elementary grades, consist of routine problems, practice with getting answers, and fluency-building exercises that parents can easily support.

Instructional Materials Evaluation Tool (IMET)

Mathematics, High School

Instructional Materials Evaluation Tool

Mathematics, High School

What Are the Purposes of the IMET?

This Math IMET is designed to help educators determine whether instructional materials are aligned to the Shifts and major features of the Common Core State Standards (CCSS). The substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-mathematics/>) at the heart of the Common Core State Standards are:

- **Focus** strongly where the Standards focus
- **Coherence:** Think across grades and link to major topics within the grade
- **Rigor:** In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

The IMET draws directly from the following documents:

- Common Core State Standards for Mathematics (www.corestandards.org/Math)
- Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf)

When to use the IMET

1. Purchasing materials: Many factors go into local purchasing decisions. Alignment to the Standards is a critical factor to consider. This tool is designed to evaluate alignment of instructional materials to the Shifts and the major features of the CCSS. It also provides suggestions of additional indicators to consider in the materials evaluation and purchasing process.
2. Evaluating materials currently in use: The IMET can be used to analyze the degree of alignment of existing materials and help to highlight specific, concrete flaws in alignment. Even where materials and tools currently in use fail to meet one or more of these criteria, the pattern of failure is likely to be informative. States and districts can use the evaluation to create a thoughtful plan to modify or combine existing resources in such a way that students' actual learning experiences approach the focus, coherence, and rigor of the Standards.
3. Developing programs: Those developing new programs can use this tool as guidance for creating aligned curricula.

Please note this tool was designed for evaluating comprehensive curricula (including any supplemental or ancillary materials), but it was not designed for the evaluation of standalone supplemental materials.

Who Uses the IMET?

Evaluating instructional materials requires both subject-matter and pedagogical expertise. Evaluators should be well versed in the Standards (www.corestandards.org/Math) for all grades in which materials are being evaluated. This includes understanding the Widely Applicable Prerequisites (www.achievethecore.org/prerequisites), how the content fits into the progressions in the Standards (www.achievethecore.org/progressions), and the expectations of the Standards with respect to conceptual understanding, procedural skill and fluency, and application. Evaluators also should be familiar with the substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-mathematics/>) of Focus, Coherence and Rigor that are listed above.

Getting Started

Prior to Evaluation

Assemble all of the materials necessary for the evaluation. It is essential for evaluators to have materials for all grades covered by the program, as some criteria cannot be rated without having access to each grade. In addition, each evaluator should have a reference copy of the Common Core State Standards for Mathematics (CCSSM) and the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Before conducting the evaluation itself, it is important to develop a protocol for the evaluation process. The protocol should include having evaluators study the Publishers' Criteria and the IMET. It will also be helpful for evaluators to get a sense of each program overall before beginning the process. At a minimum, this would include reading the front matter of the text, looking at the table of contents and paging through multiple chapters.

Sections 1–3 below should be completed to produce a comprehensive picture of the strengths and weaknesses of the materials under evaluation. Information about areas in need of improvement or supplementation should be shared with internal and external stakeholders.

Navigating the Tool

Begin with Section 1: Non-Negotiable Alignment Criteria (p. 162)

- The Non-Negotiable Alignment Criterion must be met in full for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. The Non-Negotiable Alignment Criterion has metrics associated with it; every one of these metrics must be met in order for the criterion as a whole to be met.

- Examine the relevant materials and use evidence to rate the materials against each criterion and its associated metric(s).
- Record and explain the evidence upon which the rating is based.

Continue to Section 2: Alignment Criteria (p. 172)

- The Alignment Criteria must each be met for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Alignment Criterion has one or more metric associated with it; a specific number of these metrics must be met or partially met in order for the criterion as a whole to be met.
- Examine the materials in relation to these criteria, assigning each metric a point value. Rate the criterion as “Meets” or “Does Not Meet” based on the number of points assigned. The more points the materials receive on the Alignment Criteria, the better they are aligned.
- Record and explain the evidence upon which the rating is based.

Complete Section 3: Evaluation Summary (p. 192)

- Compile all of the results from Sections 1 and 2 to determine if the instructional materials are aligned to the Shifts and major features of the CCSS.

Proceed to Section 4: Indicators of Quality (p. 194)

- Indicators of Quality are important considerations that will help evaluators better understand the overall quality of instructional materials. These considerations are not criteria for alignment to the CCSS, but they provide valuable information about additional program characteristics. Evaluators may want to add their own indicators to the examples provided.

Directions for Non-Negotiable 1

Focus and Coherence

Non-Negotiable 1: Materials must focus coherently on the Widely Applicable Prerequisites in a way that is consistent with the progressions in the Standards.

Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics (CCSSM, p. 3). Focus is necessary in order to fulfill the ambitious promise the states have made to their students by adopting the Standards: greater achievement at the college and career-ready level; greater depth of understanding of mathematics; and a rich classroom environment in which reasoning, sense-making, applications, and a range of mathematical practices flourish. In high school courses, narrowing and deepening the curriculum creates a structure that ties topics together. Thus, materials must focus coherently on the Widely Applicable Prerequisites in a way that is consistent with the progressions in the Standards.

Required Materials

- Common Core State Standards for Mathematics (www.corestandards.org/wp-content/uploads/Math_Standards.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf)
- Widely Applicable Prerequisites for College and Careers (<http://achievethecore.org/prerequisites>)
- From the materials being evaluated: teacher guides, student texts and workbooks

Rating this Criterion

Non-Negotiable 1 is rated as Meets or Does Not Meet.

To rate Non-Negotiable 1, first rate Metrics 1A–1H. Each of these eight metrics must be rated as Meets in order for Non-Negotiable 1 to be rated as Meets. Rate each metric 1A–1H as Meets or Does Not Meet/Insufficient Evidence. If the evidence examined shows that the Criterion is met, then mark the Criterion as Meets. If the evidence examined shows that the Criterion is not met—or if there is insufficient evidence to make a determination—then mark the Criterion as Does Not Meet/Insufficient Evidence. Support all ratings with evidence.

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1A:

In any single course, students spend at least 50% of their time on Widely Applicable Prerequisites.

How to Find the Evidence

Familiarize yourself with the Widely Applicable Prerequisites.

Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, lessons, homework assignments, and assessments. (Evaluate both student and teacher materials.)

Consider time spent on the Widely Applicable Prerequisites and judge qualitatively whether students and teachers using the materials as designed will devote the majority of time to the Widely Applicable Prerequisites

For context, read Criterion #1 in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1B:

Student work in Geometry involves significant work with applications/modeling and problems that use algebra skills.

How to Find the Evidence

Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, lessons, homework assignments, and assessments. (Evaluate both student and teacher materials.)
NOTE: Since Geometry contains relatively fewer Widely Applicable Prerequisites, this Criterion is important to help foster students' college and career readiness. Problems that use algebra skills might include, for example, algebraic geometry problems in a coordinate setting, or problems of measurement involving unknown quantities.

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1C:

There are problems at a level of sophistication appropriate to high school (beyond mere review of middle school topics) that involve the application of knowledge and skills from grades 6-8.

How to Find the Evidence

Evaluate lessons, chapter/unit assessments, and homework assignments. NOTE: Problems should include application of the following topics from grades 6-8:

- Ratios and proportional relationships.
- Percentage and unit conversions, e.g., in the context of complex measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m³, acre-feet, etc.).
- Basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem.
- Concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic.
- Concepts and skills of basic statistics and probability (see grades 6–8.SP)
- Performing rational number arithmetic fluently.

For context, read Table 1 on Page 8 of the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1D:

Materials base courses on the content specified in the Standards.

How to Find the Evidence

Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, and lessons in both student and teacher materials.

For context, read Criterion #3a in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1E:

Materials give all students extensive work with course-level problems.

How to Find the Evidence

Evaluate both student and teacher materials.

If the materials provide resources for differentiated learning, consider whether lower-performing students have opportunities to engage with course-level problems. Also consider whether higher-performing students are given opportunities to learn current course-level content in greater depth.

For context, read Criterion #3b in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1F:

Materials relate course-level concepts explicitly to prior knowledge from earlier grades or courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.

How to Find the Evidence

Evaluate student and teacher materials, looking for problems that involve extending the knowledge learned in earlier grades and courses. NOTE: An example of evaluating this Criterion might be to look at whether materials connect the equation of a circle with the distance formula and the Pythagorean theorem.

For context, read Criterion #3c in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1G:

Materials include learning objectives that are visibly shaped by CCSSM cluster and domain headings.

How to Find the Evidence

Select several clusters from the course being evaluated. Evaluate teacher and student materials in relation to these clusters.

For context, read Criterion #4a in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1H:

Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a category, or two or more categories, in cases where these connections are natural and important.

How to Find the Evidence

In the course being evaluated, choose two or more clusters, two or more domains, or two or more categories for which connections are natural and important.

Evaluate the units, chapters, and lessons that deal with the chosen topics, looking for problems and activities that serve to connect the chosen clusters or domains. NOTE: An example of evaluating this Criterion might be to look at whether materials include problems in which students analyze a situation by building a function, graphing it, and using it to create and solve an equation.

For context, read Criterion #4b in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Focus and Coherence

Non-Negotiable 1: Materials must focus coherently on the Widely Applicable Prerequisites in a way that is consistent with the progressions in the Standards.

Rating for Non-Negotiable 1

If all metrics 1A–1H were rated as Meets, then rate Non-Negotiable 1 as Meets. If one or more metrics were rated as Does Not Meet/Insufficient Evidence, then rate Non-Negotiable 1 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

- Meets
 Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 1, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 192.

Now continue by evaluating Alignment Criterion 1 for Rigor and Balance.

Directions for Alignment Criterion 1

Rigor and Balance

Alignment Criterion 1: Materials must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

The Standards set expectations for attention to all three aspects of rigor: conceptual understanding, procedural skill and fluency, and applications. Thus, materials must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

and Standards are chosen for all of the programs being evaluated. (Guidance in choosing clusters/Standards is included in "How to Find the Evidence" below.)

Required Materials

- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf)
- Widely Applicable Prerequisites for College and Careers (<http://achievethecore.org/prerequisites>)
- From the materials being evaluated: teacher guides, student texts and workbooks
- Choose a cluster/Standard from the Widely Applicable Prerequisites that is aligned to each aspect of rigor and use it to evaluate these metrics. It is most helpful if the same clusters

Rating this Criterion

Alignment Criterion 1 is rated as Meets or Does Not Meet.

To rate Alignment Criterion 1, first rate metrics 1A, 1B, and 1C. Rate each metric as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). For each metric, guiding questions are provided to aid in gathering evidence.

Since there are three metrics, and each metric is worth up to 2 points, the maximum possible rating across all three metrics is 6 points. Ideally, aligned materials will earn all 6 points; materials are judged to have met Alignment Criterion 1 if the materials rate 5 or 6 points. This threshold recognizes that evaluators sometimes differ in how they assess features such as rigor and balance, while at the same time ensuring that no single metric can receive a rating of zero and be aligned to the Shifts and major features of the CCSSM.

Alignment Criterion 1

Rigor and Balance

Use the questions on this page to evaluate Metric 1A. On page 174, record evidence for each question and rate Metric 1A.

Metric

AC Metric 1A:

The materials support the development of students' conceptual understanding of key mathematical concepts, especially where called for in specific content Standards or cluster headings.

How to Find the Evidence

Select one or more cluster(s) or Standard(s) from the Widely Applicable Prerequisites that relate specifically to conceptual understanding to use throughout the questions associated with this metric.

NOTE: Some examples of clusters or Standards that call for conceptual understanding include: N-RN.A.1, A-APR.B, A-REI.A.1, A-REI.D.10, A-REI.D.11, F-IF.A.1, F-LE.A.1, G-SRT.A.2, G-SRT.C.6, S-ID.C.7

For context, read Criterion #2a in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Questions for Metric

Is conceptual understanding attended to thoroughly where the Standards set explicit expectations for understanding or interpreting? Evaluate lessons, chapter/unit assessments and homework assignments, paying attention to work aligned to Standards that explicitly call for understanding or interpreting.

Do the materials feature high-quality conceptual problems and conceptual discussion questions? Evaluate lessons, chapter/unit assessments, and homework assignments.

NOTE: Examples of conceptual problems might include such questions as "What is the maximum value of the function $f(t) = 5 - t^2$?" or "Is $\sqrt{2}$ a polynomial?"

How about $\frac{1}{2}(x + \sqrt{2}) + \frac{1}{2}(-x + \sqrt{2})$?"

Do the materials feature opportunities to identify correspondences across mathematical representations? Evaluate lessons, chapter/unit assessments and homework assignments.

NOTE: An example of evaluating this metric might include looking at whether materials support students in identifying correspondences among the expression that defines a function, the graph that shows the relationship, and the behavior of the phenomenon being modeled (if any).

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1A:

The materials support the development of students' conceptual understanding of key mathematical concepts, especially where called for in specific content Standards or cluster headings.

Evidence

Is conceptual understanding attended to thoroughly where the Standards set explicit expectations for understanding or interpreting?

Do the materials feature high-quality conceptual problems and conceptual discussion questions?

Do the materials feature opportunities to identify correspondences across mathematical representations?

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Rigor and Balance

Use the questions on this page to evaluate Metric 1B. On page 176, record evidence for each question and rate Metric 1B.

Metric

AC Metric 1B:

The materials are designed so that students attain the fluencies and procedural skills required by the Standards.

How to Find the Evidence

Select one or more cluster(s) or Standard(s) from the Widely Applicable Prerequisites that relate specifically to fluency and procedural skill to use throughout the questions associated with this metric. NOTE: Some examples of Standards that call for procedural skill and fluency include: A-SSE.A.1b, A-SSE.2, A-APR.A.1, A-APR.C.6, F-BF.B.3, G-GPE.B.4, G-GPE.B.5, G-GPE.B.7, G-CO.A.1, G-SRT.B.5

For context, read Criterion #2b in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Questions for Metric

Is progress toward fluency and procedural skill interwoven with the student's developing conceptual understanding of the skills in question? Evaluate lessons, chapter/unit assessments, daily routines, and homework assignments for evidence that the development of fluency and procedural skill is supported by conceptual understanding.

Are purely procedural problems and exercises present that include cases in which opportunistic strategies are valuable and generic cases that require efficient and general procedures present? Evaluate lessons, chapter/unit assessments, daily routines, and homework assignments. NOTE: Problems in which opportunistic strategies are valuable might include such examples as solving $x^2 + 5 = 49 + 5$ or $(3x - 2)^2 = 6x - 4$. Generic cases that require efficient and general procedures might include such problems as solving $c + 8 - c^2 = 3(c - 1)^2 - 5$.

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1B:

The materials are designed so that students attain the fluencies and procedural skills required by the Standards.

Evidence

Is progress toward fluency and procedural skill interwoven with the student's developing conceptual understanding of the skills in question?

Are purely procedural problems and exercises present that include cases in which opportunistic strategies are valuable and generic cases that require efficient and general procedures present?

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Rigor and Balance

Use the questions on this page to evaluate Metric 1C. On page 178, record evidence for each question and rate Metric 1C.

Metric

AC Metric 1C:

The materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the Widely Applicable Prerequisites.

How to Find the Evidence

Select one or more cluster(s) or Standard(s) from the Widely Applicable Prerequisites that relate specifically to application to use throughout the questions associated with this metric. NOTE: Some examples of clusters or Standards that call for application include: N-Q.A, A-SSE.B.3, A-REI.D.11, F-IF.B, F-IF.C.7, F-BFA.1, G-SRT.C.8, S-ID.A.2, S-IC.A.1

For context, read Criterion #2c in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Questions for Metric

Are there single- and multi-step contextual problems, including non-routine problems, that develop the mathematics of the course, afford opportunities for practice, and engage students in problem solving? Do the problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit? Evaluate lessons, chapter/unit assessments, and homework assignments.

Do application problems particularly stress applying the Widely Applicable Prerequisites? Evaluate lessons, chapter/unit assessments, and homework assignments.

Are there ample opportunities for students to engage with modeling problems? Do materials require students to use both individual parts of the modeling cycle as well as the full modeling cycle? Read the pages on High School—Modeling in the Standards for Mathematics (pp. 72 and 73). Evaluate lessons, chapter/unit assessments, and homework assignments.

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1C:

The materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the Widely Applicable Prerequisites.

Evidence

Are there single- and multi-step contextual problems, including non-routine problems, that develop the mathematics of the course, afford opportunities for practice, and engage students in problem solving? Do the problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit?

Do application problems particularly stress applying the Widely Applicable Prerequisites?

Are there ample opportunities for students to engage with modeling problems? Do materials require students to use both individual parts of the modeling cycle as well as the full modeling cycle?

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Rigor and Balance

Alignment Criterion 1: Materials must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

Points Assigned for Alignment Criterion 1

Materials must earn at least 5 of 6 points to meet this Alignment Criterion. If materials earn less than 5 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 192.

Directions for Alignment Criterion 2

Standards for Mathematical Practice

Alignment Criterion 2: Materials must demonstrate authentic connections between content Standards and practice Standards.

The Standards require that designers of instructional materials connect the mathematical practices to mathematical content in instruction. Thus, materials must demonstrate authentic connections between content Standards and practice Standards.

Required Materials

- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf)
- Widely Applicable Prerequisites for College and Careers (<http://achievethecore.org/prerequisites>)
- From the materials being evaluated: teacher guides, student texts and workbooks

Rating this Criterion

Alignment Criterion 2 is rated as Meets or Does Not Meet.

To rate Alignment Criterion 2, first rate metrics 2A, 2B, and 2C. Rate each metric as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). For each metric, guiding questions are provided to aid in gathering evidence.

Since there are three metrics, and each metric is worth up to 2 points, the maximum possible rating across all three metrics is 6 points. Ideally, aligned materials will earn all 6 points; materials are judged to have met Alignment Criterion 2 if the materials rate 5 or 6 points. This threshold recognizes that evaluators sometimes differ in how they assess features such as mathematical practices, while at the same time ensuring that no single metric can receive a rating of zero and be aligned to the Shifts and major features of the CCSSM.

Alignment Criterion 2

Standards for Mathematical Practice

Metric

AC Metric 2A:

Materials address the practice Standards in such a way as to enrich the Widely Applicable Prerequisites; practices strengthen the focus of the course instead of detracting from it, in both teacher and student materials.

How to Find the Evidence

Familiarize yourself with the Widely Applicable Prerequisites.

Evaluate teacher and student materials for evidence that the mathematical practices support and connect to the focus of the course. NOTE: An example of evaluating this Criterion might include looking at whether materials use regularity in repeated reasoning to illuminate formal algebra as well as functions, particularly recursive definitions of functions.

For context, read Criterion #6 in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Standards for Mathematical Practice

Use the questions on this page to evaluate Metric 2B. On page 183, record evidence for each question and rate Metric 2B.

Metric

AC Metric 2B:

Materials attend to the full meaning of each practice Standard.

How to Find the Evidence

For context, read Criterion #7 in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Questions for Metric

Over the course of any given year of instruction, is each mathematical practice Standard meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice Standard? Evaluate lessons, chapter/unit assessments, and homework assignments for evidence of each mathematical practice being meaningfully present in instruction.

Are teacher-directed materials that explain the role of the practice Standards in the classroom and in students' mathematical development included? Are alignments to practice Standards accurate? Evaluate teacher materials, paying attention to explanations of the role of the practice Standards in the classroom and in students' mathematical development. Evaluate documents aligning lessons to practice Standards for accuracy. NOTE: Examples to look for when evaluating this metric might include the following: a highly scaffolded problem should not be aligned to MP.1; or a problem that directs a student to use a calculator should not be aligned to MP.5; or a problem about merely extending a pattern should not be aligned to MP.8.

Alignment Criterion 2

Standards for Mathematical Practice

Metric

AC Metric 2B:

Materials attend to the full meaning of each practice Standard.

Evidence

Over the course of any given year of instruction, is each mathematical practice Standard meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice Standard?

Are teacher-directed materials that explain the role of the practice Standards in the classroom and in students' mathematical development included? Are alignments to practice Standards accurate?

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Standards for Mathematical Practice

Use the questions on this page to evaluate Metric 2C. On page 185, record evidence for each question and rate Metric 2C.

Metric

AC Metric 2C:

Materials support the Standards' emphasis on mathematical reasoning.

How to Find the Evidence

For context, read Criterion #8 in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Questions for Metric

Do the materials support students in constructing viable arguments and critiquing the arguments of others concerning course-level mathematics that is detailed in the content Standards? Read Standard for Mathematical Practice 3. Evaluate teacher and student materials to ensure that students are given opportunities to reason with grade-level mathematics.

Do the materials support students in producing not only answers and solutions, but also, in a course-appropriate way, arguments, explanations, diagrams, mathematical models, etc., especially in the Widely Applicable Prerequisites? Familiarize yourself with the Widely Applicable Prerequisites. Evaluate teacher and student materials to understand the types of work students are expected to produce.

Do materials explicitly attend to the specialized language of mathematics? Is the language of argument, problem solving, and mathematical explanations taught rather than assumed? Evaluate teacher and student materials, paying attention to how mathematical language is taught. NOTE: An example of evaluating this Criterion might include looking at whether students are supported in: basing arguments on definitions; using the method of providing a counterexample; or recognizing that examples alone do not establish a general statement.

Alignment Criterion 2

Standards for Mathematical Practice

Metric

AC Metric 2C:

Materials support the Standards' emphasis on mathematical reasoning.

Evidence

Do the materials support students in constructing viable arguments and critiquing the arguments of others concerning course-level mathematics that is detailed in the content Standards?

Do the materials support students in producing not only answers and solutions, but also, in a course-appropriate way, arguments, explanations, diagrams, mathematical models, etc., especially in the Widely Applicable Prerequisites?

Do materials explicitly attend to the specialized language of mathematics? Is the language of argument, problem solving, and mathematical explanations taught rather than assumed?

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Standards for Mathematical Practice

Alignment Criterion 2: Materials must demonstrate authentic connections between content Standards and practice Standards.

Points Assigned for Alignment Criterion 2

Materials must earn at least 5 out of 6 points to meet this Alignment Criterion. If materials earn less than 5 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 3, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 192.

Directions for Alignment Criterion 3

Access to the Standards for All Students

Alignment Criterion 3: Materials must provide supports for English Language Learners and other special populations.

Because Standards are for all students, alignment requires thoughtful support to ensure all students are able to meet the Standards. Thus, aligned materials must provide supports for English Language Learners and other special populations.

Required Materials

- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf)
- From the materials being evaluated: teacher guides, student texts and workbooks

Rating this Criterion

Alignment Criterion 3 is rated as Meets or Does Not Meet.

To rate Alignment Criterion 3, first rate metrics 3A, 3B, and 3C. Rate

each metric as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).

Since there are three metrics, and each metric is worth up to 2 points, the maximum possible rating across all three metrics is 6 points. Ideally, aligned materials will earn all 6 points; materials are judged to have met Alignment Criterion 3 if the materials rate 5 or 6 points. This threshold recognizes that evaluators sometimes differ in how they assess features such as support for special population, while at the same time ensuring that no single metric can receive a rating of zero and be aligned to the Shifts and major features of the CCSSM.

Alignment Criterion 3

Access to the Standards for All Students

Metric

AC Metric 3A:

Support for English Language Learners and other special populations is thoughtful and helps those students meet the same Standards as all other students. The language in which problems are posed is carefully considered.

How to Find the Evidence

Evaluate teacher and student materials, paying attention to supports offered for special populations.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Access to the Standards for All Students

Metric

AC Metric 3B:

Materials provide appropriate level and type of scaffolding, differentiation, intervention, and support for a broad range of learners with gradual removal of supports, when needed, to allow students to demonstrate their mathematical understanding independently.

How to Find the Evidence

Evaluate teacher and student materials, paying attention to whether materials provide differentiation that will lead all learners to engage with on-grade-level content.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Access to the Standards for All Students

Metric

AC Metric 3C:

Design of lessons recommends and facilitates a mix of instructional approaches for a variety of learners such as using multiple representations (e.g., including models, using a range of questions, checking for understanding, flexible grouping, pair-share).

How to Find the Evidence

Evaluate teacher materials, noting instructional approaches suggested for whole class and differentiated lessons and activities.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Access to the Standards for All Students

Alignment Criterion 3: Materials must provide supports for English Language Learners and other special populations.

Points Assigned for Alignment Criterion 3

Materials must earn at least 5 out of 6 points to meet this Alignment Criterion. If materials earn less than 5 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Move to the Evaluation Summary on the following page to record the final Meets or Does Not Meet rating.

IMET Evaluation Summary 1 of 2

Program: _____

Name of Evaluator(s): _____

Publisher: _____

Date of Evaluation: _____

Date of Publication: _____

Signature of Each Evaluator(s): _____

Non-Negotiable Criteria

The Non-Negotiable Criterion must be Met.

Non-Negotiable 1: Focus and Coherence

Meets

Does Not Meet

Alignment Criteria

Each Alignment must be met with a sufficient number of points in order for Alignment Criteria to be labeled as “Meets” overall. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 1: Rigor and Balance

Points: ____ of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

Meets

Does Not Meet

Alignment Criterion 2: Standards for Mathematical Practice

Points: ____ of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

Meets

Does Not Meet

Alignment Criterion 3: Access to Standards for All Learners

Points: ____ of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

Meets

Does Not Meet

Alignment Criteria Overall

Meets

Does Not Meet

IMET Evaluation Summary 2 of 2

Program: _____

Name of Evaluator (s): _____

Publisher: _____

Date of Evaluation: _____

Date of Publication: _____

Signature of Each Evaluator (s): _____

Summary

If the materials meet the Non-Negotiable Criterion and each Alignment Criterion, they are aligned to the Shifts and major features of the CCSS.

Do the materials meet every Non-Negotiable and Alignment Criteria?

Yes

No

What are the specific areas of strength and weakness based on this evaluation?

Publishers or others modifying or developing assessments can use this information to make improvements and/or to remedy gaps in the alignment of assessment materials.

Indicators of Quality

Once an evaluation for alignment to the Shifts and major features of the CCSS has been conducted using Sections 1-3, it's important to evaluate for overall quality and best practices. A starting list of Indicators of Quality are suggested below. States, districts and others evaluating instructional materials are encouraged to add to this list to ensure materials reflect local contexts. For background information on some of the Indicators of Quality in this section, refer to pp.16–18 in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Indicators	Evidence	Rating (Y/N)
1. Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.		
2. The underlying design of the materials includes both problems and exercises. (In solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery.) Each problem or exercise has a purpose. NOTE: This Criterion does not require that the problems and exercises be labeled as such.		
3. Design of assignments is not haphazard: exercises are given in intentional sequences in order to strengthen students' mathematical understanding.		

Indicators of Quality

Indicators

Evidence

Rating (Y/N)

4. There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.

5. Manipulatives suggested in the materials are faithful representations of the mathematical objects they represent and are connected to written methods.

6. Materials include a variety of curriculum-embedded assessments. Examples include pre-, formative, summative, and self-assessment resources.

7. Assessments contain aligned rubrics, answer keys, and scoring guidelines that provide sufficient guidance for interpreting student performance.

8. Materials assess student proficiency using methods that are accessible and unbiased, including the use of course-level language in student prompts.

Indicators of Quality

Indicators

Evidence

Rating (Y/N)

9. Materials are carefully evaluated by qualified individuals, whose names are listed, in an effort to ensure freedom from mathematical errors and course-level appropriateness.

10. The visual design supports students in engaging thoughtfully with the subject. Navigation through the text is clear.

Section 3

EQulP

- 202** Mathematics, Grades K–12 Rubric
- 204** ELA/Literacy, Grades K–2 Rubric
- 206** ELA/Literacy, Grades 3–5 & 6–12 Rubric
- 208** Student Work Protocol

EQulP Rubric

Educators Evaluating Quality Instructional Products (EQulP) is a collaborative of states working with Achieve to increase the supply of quality instructional materials that are aligned to the CCSS and build the capacity of educators to evaluate and improve the quality of instructional materials for use in their classrooms and schools. The EQulP Rubrics are a set of quality review tools to evaluate the alignment of lessons, units and modules to the CCSS. There are three EQulP Rubrics, one each for Mathematics, K–2 English Language Arts/Literacy, and a combined rubric for 3–5 English Language Arts/Literacy and 6–12 English Language Arts. EQulP builds on a collaborative effort of education leaders from Massachusetts, New York and Rhode Island that Achieve facilitated.

The EQulP Rubrics should be used for:

- Guiding the development of lessons and units;
- Evaluating existing lessons and units to identify improvements needed to align with the CCSS;
- Building the capacity of teachers to gain a deeper understanding of the instructional demands of the CCSS; and,
- Informing publishers of the criteria that will be applied in the evaluation of proposals and final products.

a) Where to find online:

To view and download the rubrics and related training materials, please visit: www.achieve.org/equip

b) Who uses:

The EQulP Rubrics are designed for use by educators and administrators responsible for developing, reviewing or making determinations about materials for use in classrooms. This includes classroom teachers, instructional coaches, instructional leaders and administrators at the school, district or state level.

c) Target materials:

The EQulP Rubrics are designed to evaluate lessons that include instructional activities and assessments aligned to the CCSS that may extend over a few class periods or days as well as units that include integrated and focused lessons aligned to the CCSS that extend over a period of several weeks. The rubrics are not designed to evaluate a single task or activity or portion of a lesson. The rubrics intentionally do not require a specific template for lesson or unit design.

d) How to use:

The EQulP Rubrics can guide the development of lessons and units as well as examine and evaluate existing lessons and units to identify improvements necessary to align with the CCSS. They can be used by individuals or groups, integrated into formal review panels/processes and professional learning communities, and/or used more informally to guide discussions and decision making.

The criteria in the EQulP Rubrics are separated into four dimensions: Alignment to the Depth of the CCSS, Key Shifts in the CCSS, Instructional Supports, and Assessment.

Getting Started

It is helpful to first orient yourself to all of the materials necessary to complete an EQulP Quality Review. These materials will include the lesson or unit being evaluated, including any texts or rubrics utilized by teachers or students, a copy of the Common Core State Standards, and an EQulP Rubric Feedback form. As this is a collegial process, reviewers working together should introduce themselves to one another.

Principles & Agreements

Adhering to the EQuIP principles and agreements creates a collegial environment in which reviewers can develop criterion-based suggestions for improving the alignment and quality of instructional materials. It is vital to the process to create a collegial environment, recognizing both that it is challenging to create high-quality instructional materials and that it is necessary to receive quality feedback in order to improve these materials.

1. **CCSS:** Before beginning a review, all members are confident in their knowledge of the CCSS.
2. **Inquiry:** Review processes emphasize inquiry and are organized in steps around a set of guiding questions.
3. **Respect & Commitment:** Each member of a review team is respected as a valued colleague and contributor who makes a commitment to the EQuIP process.
4. **Criteria & Evidence:** All observations, judgments, discussions, and recommendations are criterion- and evidence-based.
5. **Constructive:** Lessons/units to be reviewed are seen as “works in progress.” Reviewers are respectful of contributors’ work and make constructive observations and suggestions based on evidence from the work.
6. **Individual to Collective:** Each member of a review team independently records his/her observations prior to discussion. Discussions focus on understanding all reviewers’ interpretations of the criteria and the evidence they have found.
7. **Understanding & Agreement:** The goal of the process is to compare and eventually calibrate judgments to

move toward agreement about quality with respect to the CCSS.

Giving Feedback

The goal of EQuIP is to support the education community in the development of exemplary curriculum; constructive feedback and comments are fundamental to improving the materials. Reviewers should consider their audience and purposes when crafting the tone and content of their comments. It is critical to read every page of a lesson or unit. Writing effective feedback is vital to the EQuIP Quality Review Process. Below are the four qualities of effective feedback.

- **Criteria-based:** Written comments are based on the criteria used for review in each dimension. No extraneous or personal comments are included.
- **Evidence Cited:** Written comments suggest that the reviewer looked for evidence in the lesson or unit that address each criterion of a given dimension. Examples are provided that cite where and how the criteria are met or not met.
- **Improvement Suggested:** When improvements are identified to meet criteria or strengthen the lesson or unit, specific information is provided about how and where such improvement should be added to the material.
- **Clear Communication:** Written comments are constructed in a manner keeping with basic grammar, spelling, sentence structure and conventions.

EQuIP Quality Review Steps

Step 1. Review Materials

- Record the grade and title of the lesson/unit on the Quality Review Rubric PDF.
- Scan to see what the lesson/unit contains and how it is organized.
- Read key materials related to instruction, assessment and teacher guidance.
- In ELA, study and measure the text(s) that serves as the centerpiece for the lesson/unit, analyzing text complexity, quality, scope, and relationship to instruction.
- In math, study and work the task that serves as the centerpiece for the lesson/unit, analyzing the content and mathematics practices the tasks require.

Guidance for facilitators: During Step 1, reviewers should not try to read every word of the lesson/unit from start to finish, but rather get an overall sense of what is contained in the instructional materials. It is particularly important that reviewers read the text(s) and look for the quantitative and qualitative measures of text(s) complexity or study and work the tasks that are central to instruction.

Explain that reviewers should not use the EQuIP Rubric during Step 1. Reviewers will have ample opportunity to think deeply about the criteria in each dimension during subsequent steps of the review process.

If the materials are not clearly labeled, it is necessary to determine if the materials should be reviewed as a lesson or unit. EQuIP generally defines a lesson as one to ten days of instruction and a unit as two to ten weeks of

instruction; however, reviewers should use their professional judgment when making this determination. Please consider if it would be appropriate to apply the additional criteria given the purpose of instruction and the standard(s) the materials target.

Step 2. Apply Criteria in Dimension I: Alignment to the Depth of the CCSS

- Identify the grade-level CCSS that the lesson/unit targets.
- Closely examine the materials through the “lens” of each criterion.
- Indicate each criterion for which clear and substantial evidence is found.
- Record evidence and specific improvements needed to meet criteria or strengthen alignment.
- Compare observations and suggestions for improvement.

Guidance for facilitators: The criteria may only be checked if there is clear and substantial evidence of the criterion (there are no “half-checks”). There may be instances when reviewers find clear and substantial evidence of a criterion and there are still constructive suggestions that can be made. In such cases, reviewers may provide feedback related to criteria that have been checked.

Step 3. Apply Criteria in Dimensions II–IV

- Examine the lesson/unit through the “lens” of each criterion.
- Indicate each criterion met and record observations and feedback.

Step 4. Apply an Overall Rating and Provide Summary Comments

- Individually review comments for Dimensions I–IV, adding/clarifying comments as needed.
- Individually write summary comments on the Quality Review Rubric PDF.

Guidance for facilitators: If reviewers are going to stop a review at Dimension I, take time to make sure the criteria are absent.

There may be instances when reviewers find clear and substantial evidence of a criterion and there are still constructive suggestions that can be made. In such cases, reviewers should provide feedback related to criteria that have been checked.

It's acceptable to give a "3" rating without having all of the criteria checked within a dimension. It's about supporting with evidence regardless of the rating a reviewer gives. If recommendations for improvement are too significant, then the rating should be less than a "3." There should be a relationship between the number of checks and the overall rating. There shouldn't be huge misalignment, but it comes down to professional judgment. Reviewers should stand back and look at the review in its totality.

Step 5. Compare Overall Ratings and Determine Next Steps

- Note the evidence cited to arrive at summary comments and similarities and differences among reviewers. Recommend next steps for the lesson/unit and provide recommendations for improvement to developers/teachers.

I. Alignment to the Depth of the CCSS	II. Key Shifts in the CCSS	III. Instructional Supports	IV. Assessment
<p><i>The lesson/unit aligns with the letter and spirit of the CCSS:</i></p> <ul style="list-style-type: none"> ○ Targets a set of grade-level CCSS mathematics standard(s) to the full depth of the standards for teaching and learning. ○ Standards for Mathematical Practice that are central to the lesson are identified, handled in a grade-appropriate way, and well connected to the content being addressed. ○ Presents a balance of mathematical procedures and deeper conceptual understanding inherent in the CCSS. 	<p><i>The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:</i></p> <ul style="list-style-type: none"> ○ Focus: Lessons and units targeting the major work of the grade provide an especially in-depth treatment, with especially high expectations. Lessons and units targeting supporting work of the grade have visible connection to the major work of the grade and are sufficiently brief. Lessons and units do not hold students responsible for material from later grades. ○ Coherence: The content develops through reasoning about the new concepts on the basis of previous understandings. Where appropriate, provides opportunities for students to connect knowledge and skills within or across clusters, domains and learning progressions. ○ Rigor: Requires students to engage with and demonstrate challenging mathematics with appropriate balance among the following: <ul style="list-style-type: none"> – Application: Provides opportunities for students to independently apply mathematical concepts in real-world situations and solve challenging problems with persistence, choosing and applying an appropriate model or strategy to new situations. – Conceptual Understanding: Develops students’ conceptual understanding through tasks, brief problems, questions, multiple representations and opportunities for students to write and speak about their understanding. – Procedural Skill and Fluency: Expects, supports and provides guidelines for procedural skill and fluency with core calculations and mathematical procedures (when called for in the standards for the grade) to be performed quickly and accurately. 	<p><i>The lesson/unit is responsive to varied student learning needs:</i></p> <ul style="list-style-type: none"> ○ Includes clear and sufficient guidance to support teaching and learning of the targeted standards, including, when appropriate, the use of technology and media. ○ Uses and encourages precise and accurate mathematics, academic language, terminology and concrete or abstract representations (e.g., pictures, symbols, expressions, equations, graphics, models) in the discipline. ○ Engages students in productive struggle through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking. ○ Addresses instructional expectations and is easy to understand and use. ○ Provides appropriate level and type of scaffolding, differentiation, intervention and support for a broad range of learners. <ul style="list-style-type: none"> – Supports diverse cultural and linguistic backgrounds, interests and styles. – Provides extra supports for students working below grade level. – Provides extensions for students with high interest or working above grade level. <p><u><i>A unit or longer lesson should:</i></u></p> <ul style="list-style-type: none"> ○ Recommend and facilitate a mix of instructional approaches for a variety of learners such as using multiple representations (e.g., including models, using a range of questions, checking for understanding, flexible grouping, pair-share). ○ Gradually remove supports, requiring students to demonstrate their mathematical understanding independently. ○ Demonstrate an effective sequence and a progression of learning where the concepts or skills advance and deepen over time. ○ Expect, support and provide guidelines for procedural skill and fluency with core calculations and mathematical procedures (when called for in the standards for the grade) to be performed quickly and accurately. 	<p><i>The lesson/unit regularly assesses whether students are mastering standards-based content and skills:</i></p> <ul style="list-style-type: none"> ○ Is designed to elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted CCSS. ○ Assesses student proficiency using methods that are accessible and unbiased, including the use of grade-level language in student prompts. ○ Includes aligned rubrics, answer keys and scoring guidelines that provide sufficient guidance for interpreting student performance. <p><u><i>A unit or longer lesson should:</i></u></p> <ul style="list-style-type: none"> ○ Use varied modes of curriculum-embedded assessments that may include pre-, formative, summative and self-assessment measures.
<p>Rating: 3 2 1 0</p>	<p>Rating: 3 2 1 0</p>	<p>Rating: 3 2 1 0</p>	<p>Rating: 3 2 1 0</p>

EQIP Rubric for Lessons & Units: Mathematics

Directions: The Quality Review Rubric provides criteria to determine the quality and alignment of lessons and units to the Common Core State Standards (CCSS) in order to: (1) Identify exemplars/ models for teachers’ use within and across states; (2) provide constructive criteria-based feedback to developers; and (3) review existing instructional materials to determine what revisions are needed.

Step 1 – Review Materials

- Record the grade and title of the lesson/unit on the recording form.
- Scan to see what the lesson/unit contains and how it is organized.
- Read key materials related to instruction, assessment and teacher guidance.
- Study and work the task that serves as the centerpiece for the lesson/unit, analyzing the content and mathematical practices the tasks require.

Step 2 – Apply Criteria in Dimension I: Alignment

- Identify the grade-level CCSS that the lesson/unit targets.
- Closely examine the materials through the “lens” of each criterion.
- Individually check each criterion for which clear and substantial evidence is found.
- Identify and record input on specific improvements that might be made to meet criteria or strengthen alignment.
- Enter your rating 0 – 3 for Dimension I: Alignment.

Note: Dimension I is non-negotiable. In order for the review to continue, a rating of 2 or 3 is required. If the review is discontinued, consider general feedback that might be given to developers/teachers regarding next steps.

Step 3 – Apply Criteria in Dimensions II – IV

- Closely examine the lesson/unit through the “lens” of each criterion.
- Record comments on criteria met, improvements needed and then rate 0 – 3.

When working in a group, individuals may choose to compare ratings after each dimension or delay conversation until each person has rated and recorded their input for the remaining Dimensions II – IV.

Step 4 – Apply an Overall Rating and Provide Summary Comments

- Review ratings for Dimensions I – IV adding/clarifying comments as needed.
- Write summary comments for your overall rating on your recording sheet.
- Total dimension ratings and record overall rating E, E/I, R, N – adjust as necessary.

If working in a group, individuals should record their overall rating prior to conversation.

Step 5 – Compare Overall Ratings and Determine Next Steps

- Note the evidence cited to arrive at final ratings, summary comments and similarities and differences among raters. Recommend next steps for the lesson/unit and provide recommendations for improvement and/or ratings to developers/teachers.

Additional Guidance on Dimension II: Shifts - When considering *Focus* it is important that lessons or units targeting additional and supporting clusters are sufficiently brief – this ensures that students will spend the strong majority of the year on major work of the grade. See the *K-8 Publishers Criteria for the Common Core State Standards in Mathematics*, particularly pages 8-9 for further information on the focus criterion with respect to major work of the grade at www.corestandards.org/assets/Math_Publishers_Criteria_K-8_Summer%202012_FINAL.pdf. With respect to *Coherence* it is important that the learning objectives are linked to CCSS cluster headings (see www.corestandards.org/Math).

Rating Scales

Rating for Dimension I: Alignment is non-negotiable and requires a rating of 2 or 3. If rating is 0 or 1 then the review does not continue.

Rating Scale for Dimensions I, II, III, IV:

3: Meets most to all of the criteria in the dimension

2: Meets many of the criteria in the dimension

1: Meets some of the criteria in the dimension

0: Does not meet the criteria in the dimension

Descriptors for Dimensions I, II, III, IV:

3: Exemplifies CCSS Quality - meets the standard described by criteria in the dimension, as explained in criterion-based observations.

2: Approaching CCSS Quality - meets many criteria but will benefit from revision in others, as suggested in criterion-based observations.

1: Developing toward CCSS Quality - needs significant revision, as suggested in criterion-based observations.

0: Not representing CCSS Quality - does not address the criteria in the dimension.

Overall Rating for the Lesson/Unit:

E: Exemplar – Aligned and meets most to all of the criteria in dimensions II, III, IV (**total 11 – 12**)

E/I: Exemplar *if* Improved – Aligned and needs some improvement in one or more dimensions (**total 8 – 10**)

R: Revision Needed – Aligned partially and needs significant revision in one or more dimensions (**total 3 – 7**)

N: Not Ready to Review – Not aligned and does not meet criteria (**total 0 – 2**)

Descriptor for Overall Ratings:

E: Exemplifies CCSS Quality – Aligned and exemplifies the quality standard and exemplifies most of the criteria across Dimensions II, III, IV of the rubric.

E/I: Approaching CCSS Quality – Aligned and exemplifies the quality standard in some dimensions but will benefit from some revision in others.

R: Developing toward CCSS Quality – Aligned partially and approaches the quality standard in some dimensions and needs significant revision in others.

N: Not representing CCSS Quality – Not aligned and does not address criteria.

Grade: **Literacy Lesson/Unit Title:**

Overall Rating:

I. Alignment to the Depth of the CCSS	II. Key Shifts in the CCSS	III. Instructional Supports	IV. Assessment
<p><i>The lesson/unit aligns with the letter and spirit of the CCSS:</i></p> <ul style="list-style-type: none"> ○ Targets a set of K-2 ELA/Literacy CCSS for teaching and learning. ○ Includes a clear and explicit purpose for instruction. ○ Selects quality text(s) that align with the requirements outlined in the standards, presents characteristics similar to CCSS K-2 exemplars (Appendix B), and are of sufficient scope for the stated purpose. ○ Provides opportunities for students to present ideas and information through writing and/or drawing and speaking experiences. <p><u><i>A unit or longer lesson should:</i></u></p> <ul style="list-style-type: none"> ○ Emphasize the explicit, systematic development of foundational literacy skills (concepts of print, phonological awareness, the alphabetic principle, high frequency sight words, and phonics). ○ Regularly include specific fluency-building techniques supported by research (e.g., monitored partner reading, choral reading, repeated readings with text, following along in the text when teacher or other fluent reader is reading aloud, short timed practice that is slightly challenging to the reader). ○ Integrate reading, writing, speaking and listening so that students apply and synthesize advancing literacy skills. ○ Build students' content knowledge in social studies, the arts, science or technical subjects through a coherent sequence of texts and series of questions that build knowledge within a topic. 	<p><i>The lesson/unit addresses key shifts in the CCSS:</i></p> <ul style="list-style-type: none"> ○ Reading Text Closely: Makes reading text(s) closely (including read alouds) a central focus of instruction and includes regular opportunities for students to ask and answer text-dependent questions. ○ Text-Based Evidence: Facilitates rich text-based discussions and writing through specific, thought-provoking questions about common texts (including read alouds and, when applicable, illustrations, audio/video and other media). ○ Academic Vocabulary: Focuses on explicitly building students' academic vocabulary and concepts of syntax throughout instruction. <p><u><i>A unit or longer lesson should:</i></u></p> <ul style="list-style-type: none"> ○ Grade-Level Reading: Include a progression of texts as students learn to read (e.g., additional phonic patterns are introduced, increasing sentence length). Provides text-centered learning that is sequenced, scaffolded and supported to advance students toward independent grade-level reading. ○ Balance of Texts: Focus instruction equally on literary and informational texts as stipulated in the CCSS (p.5) and indicated by instructional time (<i>may be more applicable across a year or several units</i>). ○ Balance of Writing: Include prominent and varied writing opportunities for students that balance communicating thinking and answering questions with self-expression and exploration. 	<p><i>The lesson/unit is responsive to varied student learning needs:</i></p> <ul style="list-style-type: none"> ○ Cultivates student interest and engagement in reading, writing and speaking about texts. ○ Addresses instructional expectations and is easy to understand and use for teachers (e.g., clear directions, sample proficient student responses, sections that build teacher understanding of the whys and how of the material). ○ Integrates targeted instruction in multiple areas such as grammar and syntax, writing strategies, discussion rules and aspects of foundational reading. ○ Provides substantial materials to support students who need more time and attention to achieve automaticity with decoding, phonemic awareness, fluency and/or vocabulary acquisition. ○ Provides <i>all</i> students (including emergent and beginning readers) with extensive opportunities to engage with grade-level texts and read alouds that are at high levels of complexity including appropriate scaffolding so that students directly experience the complexity of text. ○ Focuses on sections of rich text(s) (including read alouds) that present the greatest challenge; provides discussion questions and other supports to promote student engagement, understanding and progress toward independence. ○ Integrates appropriate, extensive and easily implemented supports for students who are ELL, have disabilities and/or read or write below grade level. ○ Provides extensions and/or more advanced text for students who read or write above grade level. <p><u><i>A unit or longer lesson should:</i></u></p> <ul style="list-style-type: none"> ○ Include a progression of learning where concepts, knowledge and skills advance and deepen over time (<i>may be more applicable across the year or several units</i>). ○ Gradually remove supports, allowing students to demonstrate their independent capacities (<i>may be more applicable across the year or several units</i>). ○ Provide for authentic learning, application of literacy skills and/or student-directed inquiry. ○ Indicate how students are accountable for independent engaged reading based on student choice and interest to build stamina, confidence and motivation (<i>may be more applicable across the year or several units</i>). ○ Use technology and media to deepen learning and draw attention to evidence and texts as appropriate. 	<p><i>The lesson/unit regularly assesses whether students are developing standards-based skills:</i></p> <ul style="list-style-type: none"> ○ Elicits direct, observable evidence of the degree to which a student can independently demonstrate foundational skills and targeted grade level literacy CCSS (e.g., reading, writing, speaking and listening and/or language). ○ Assesses student proficiency using methods that are unbiased and accessible to all students. ○ Includes aligned rubrics or assessment guidelines that provide sufficient guidance for interpreting student performance and responding to areas where students are not yet meeting standards. <p><u><i>A unit or longer lesson should:</i></u></p> <ul style="list-style-type: none"> ○ Use varied modes of assessment, including a range of pre-, formative, summative and self-assessment measures.
<p align="center">Rating: 3 2 1 0</p>	<p align="center">Rating: 3 2 1 0</p>	<p align="center">Rating: 3 2 1 0</p>	<p align="center">Rating: 3 2 1 0</p>

EQuIP Rubric for Lessons & Units: ELA/Literacy Grades K-2

Directions: The Quality Review Rubric provides criteria to determine the quality and alignment of lessons and units to the Common Core State Standards (CCSS) in order to: (1) Identify exemplars/ models for teachers’ use within and across states; (2) provide constructive criteria-based feedback to developers; and (3) review existing instructional materials to determine what revisions are needed.

Step 1 – Review Materials

- Record the grade and title of the lesson/unit on the recording form.
- Scan to see what the lesson/unit contains and how it is organized.
- Read key materials related to instruction, assessment and teacher guidance.
- Study and measure the text(s) that serves as the centerpiece for the lesson/unit, analyzing text complexity, quality, scope, and relationship to instruction.

Step 2 – Apply Criteria in Dimension I: Alignment

- Identify the grade-level CCSS that the lesson/unit targets.
- Closely examine the materials through the “lens” of each criterion.
- Individually check each criterion for which clear and substantial evidence is found.
- Identify and record input on specific improvements that might be made to meet criteria or strengthen alignment.
- Enter your rating 0 – 3 for Dimension I: Alignment

Note: Dimension I is non-negotiable. In order for the review to continue, a rating of 2 or 3 is required. If the review is discontinued, consider general feedback that might be given to developers/teachers regarding next steps.

Step 3 – Apply Criteria in Dimensions II – IV

- Closely examine the lesson/unit through the “lens” of each criterion.
- Record comments on criteria met, improvements needed and then rate 0 – 3.

When working in a group, individuals may choose to compare ratings after each dimension or delay conversation until each person has rated and recorded their input for the remaining Dimensions II – IV.

Step 4 – Apply an Overall Rating and Provide Summary Comments

- Review ratings for Dimensions I – IV adding/clarifying comments as needed.
- Write summary comments for your overall rating on your recording sheet.
- Total dimension ratings and record overall rating E, E/I, R, N – adjust as necessary.

If working in a group, individuals should record their overall rating prior to conversation.

Step 5 – Compare Overall Ratings and Determine Next Steps

- Note the evidence cited to arrive at final ratings, summary comments and similarities and differences among raters. Recommend next steps for the lesson/unit and provide recommendations for improvement and/or ratings to developers/teachers.

Additional Guidance for ELA/Literacy – When selecting text(s) that measure within the grade-level or text complexity band and are of sufficient quality and scope for the stated purpose, see *The Common Core State Standards in English Language Arts/Literacy* at www.corestandards.org/ELA-Literacy; and the *Supplement for Appendix A: New Research on Text Complexity as well as Quantitative and Qualitative Measures* at www.achievethecore.org/steal-these-tools/text-complexity. See *The Publishers’ Criteria* for Grades K-2 and the same for Grades 3-12 at www.achievethecore.org/steal-these-tools.

Rating Scales

Note: Rating for Dimension I: Alignment is non-negotiable and requires a rating of 2 or 3. If rating is 0 or 1 then the review does not continue.

Rating Scale for Dimensions I, II, III, IV:

- 3:** Meets most to all of the criteria in the dimension
2: Meets many of the criteria in the dimension
1: Meets some of the criteria in the dimension
0: Does not meet the criteria in the dimension

Descriptors for Dimensions I, II, III, IV:

- 3: Exemplifies CCSS Quality** – meets the standard described by criteria in the dimension, as explained in criterion-based observations.
2: Approaching CCSS Quality – meets many criteria but will benefit from revision in others, as suggested in criterion-based observations.
1: Developing toward CCSS Quality – needs significant revision, as suggested in criterion-based observations.
0: Not representing CCSS Quality – does not address the criteria in the dimension.

Overall Rating for the Lesson/Unit:

- E: Exemplar** – Aligned and meets most to all of the criteria in dimensions II, III, IV (**total 11 – 12**)
E/I: Exemplar if Improved – Aligned and needs some improvement in one or more dimensions (**total 8 – 10**)
R: Revision Needed – Aligned partially and needs significant revision in one or more dimensions (**total 3 – 7**)
N: Not Ready to Review – Not aligned and does not meet criteria (**total 0 – 2**)

Descriptors for Overall Rating:

- E: Exemplifies CCSS Quality** – Aligned and exemplifies the quality standard and exemplifies most of the criteria across Dimensions II, III, IV of the rubric.
E/I: Approaching CCSS Quality – Aligned and exemplifies the quality standard in some dimensions but will benefit from some revision in others.
R: Developing toward CCSS Quality – Aligned partially and approaches the quality standard in some dimensions and needs significant revision in others.
N: Not representing CCSS Quality – Not aligned and does not address criteria.

Grade: **Literacy Lesson/Unit Title:**

Overall Rating:

I. Alignment to the Depth of the CCSS	II. Key Shifts in the CCSS	III. Instructional Supports	IV. Assessment
<p><i>The lesson/unit aligns with the letter and spirit of the CCSS:</i></p> <ul style="list-style-type: none"> ○ Targets a set of grade-level CCSS ELA/Literacy standards. ○ Includes a clear and explicit purpose for instruction. ○ Selects text(s) that measure within the grade-level text complexity band and are of sufficient quality and scope for the stated purpose (e.g., presents vocabulary, syntax, text structures, levels of meaning/purpose, and other qualitative characteristics similar to CCSS grade-level exemplars in Appendices A & B). <p><u>A unit or longer lesson should:</u></p> <ul style="list-style-type: none"> ○ Integrate reading, writing, speaking and listening so that students apply and synthesize advancing literacy skills. ○ (Grades 3-5) Build students' content knowledge and their understanding of reading and writing in social studies, the arts, science or technical subjects through the coherent selection of texts. 	<p><i>The lesson/unit addresses key shifts in the CCSS:</i></p> <ul style="list-style-type: none"> ○ Reading Text Closely: Makes reading text(s) closely, examining textual evidence, and discerning deep meaning a central focus of instruction. ○ Text-Based Evidence: Facilitates rich and rigorous evidence-based discussions and writing about common texts through a sequence of specific, thought-provoking, and text-dependent questions (including, when applicable, questions about illustrations, charts, diagrams, audio/video, and media). ○ Writing from Sources: Routinely expects that students draw evidence from texts to produce clear and coherent writing that informs, explains, or makes an argument in various written forms (e.g., notes, summaries, short responses, or formal essays). ○ Academic Vocabulary: Focuses on building students' academic vocabulary in context throughout instruction. <p><u>A unit or longer lesson should:</u></p> <ul style="list-style-type: none"> ○ Increasing Text Complexity: Focus students on reading a progression of complex texts drawn from the grade-level band. Provide text-centered learning that is sequenced, scaffolded and supported to advance students toward independent reading of complex texts at the CCR level. ○ Building Disciplinary Knowledge: Provide opportunities for students to build knowledge about a topic or subject through analysis of a coherent selection of strategically sequenced, discipline-specific texts. ○ Balance of Texts: Within a collection of grade-level units a balance of informational and literary texts is included according to guidelines in the CCSS (p. 5). ○ Balance of Writing: Include a balance of on-demand and process writing (e.g., multiple drafts and revisions over time) and short, focused research projects, incorporating digital texts where appropriate. 	<p><i>The lesson/unit is responsive to varied student learning needs:</i></p> <ul style="list-style-type: none"> ○ Cultivates student interest and engagement in reading, writing and speaking about texts. ○ Addresses instructional expectations and is easy to understand and use. ○ Provides <i>all</i> students with multiple opportunities to engage with text of appropriate complexity for the grade level; includes appropriate scaffolding so that students directly experience the complexity of the text. ○ Focuses on challenging sections of text(s) and engages students in a productive struggle through discussion questions and other supports that build toward independence. ○ Integrates appropriate supports in reading, writing, listening and speaking for students who are ELL, have disabilities, or read well below the grade level text band. ○ Provides extensions and/or more advanced text for students who read well above the grade level text band. <p><u>A unit or longer lesson should:</u></p> <ul style="list-style-type: none"> ○ Include a progression of learning where concepts and skills advance and deepen over time (<i>may be more applicable across the year or several units</i>). ○ Gradually remove supports, requiring students to demonstrate their independent capacities (<i>may be more applicable across the year or several units</i>). ○ Provide for authentic learning, application of literacy skills, student-directed inquiry, analysis, evaluation and/or reflection. ○ Integrate targeted instruction in such areas as grammar and conventions, writing strategies, discussion rules and all aspects of foundational reading for grades 3-5. ○ Indicate how students are accountable for independent reading based on student choice and interest to build stamina, confidence and motivation (<i>may be more applicable across the year or several units</i>). ○ Use technology and media to deepen learning and draw attention to evidence and texts as appropriate. 	<p><i>The lesson/unit regularly assesses whether students are mastering standards-based content and skills:</i></p> <ul style="list-style-type: none"> ○ Elicits direct, observable evidence of the degree to which a student can independently demonstrate the major targeted grade-level CCSS standards with appropriately complex text(s). ○ Assesses student proficiency using methods that are unbiased and accessible to all students. ○ Includes aligned rubrics or assessment guidelines that provide sufficient guidance for interpreting student performance. <p><u>A unit or longer lesson should:</u></p> <ul style="list-style-type: none"> ○ Use varied modes of assessment, including a range of pre-, formative, summative and self-assessment measures.
<p align="center">Rating: 3 2 1 0</p>	<p align="center">Rating: 3 2 1 0</p>	<p align="center">Rating: 3 2 1 0</p>	<p align="center">Rating: 3 2 1 0</p>

EQiP Rubric for Lessons & Units: ELA/Literacy (Grades 3-5) and ELA (Grades 6-12)

Directions: The Quality Review Rubric provides criteria to determine the quality and alignment of lessons and units to the Common Core State Standards (CCSS) in order to: (1) Identify exemplars/ models for teachers’ use within and across states; (2) provide constructive criteria-based feedback to developers; and (3) review existing instructional materials to determine what revisions are needed.

Step 1 – Review Materials

- Record the grade and title of the lesson/unit on the recording form.
- Scan to see what the lesson/unit contains and how it is organized.
- Read key materials related to instruction, assessment and teacher guidance.
- Study and measure the text(s) that serves as the centerpiece for the lesson/unit, analyzing text complexity, quality, scope, and relationship to instruction.

Step 2 – Apply Criteria in Dimension I: Alignment

- Identify the grade-level CCSS that the lesson/unit targets.
- Closely examine the materials through the “lens” of each criterion.
- Individually check each criterion for which clear and substantial evidence is found.
- Identify and record input on specific improvements that might be made to meet criteria or strengthen alignment.
- Enter your rating 0 – 3 for Dimension I: Alignment

Note: Dimension I is non-negotiable. In order for the review to continue, a rating of 2 or 3 is required. If the review is discontinued, consider general feedback that might be given to developers/teachers regarding next steps.

Step 3 – Apply Criteria in Dimensions II – IV

- Closely examine the lesson/unit through the “lens” of each criterion.
- Record comments on criteria met, improvements needed and then rate 0 – 3.

When working in a group, individuals may choose to compare ratings after each dimension or delay conversation until each person has rated and recorded their input for the remaining Dimensions II – IV.

Step 4 – Apply an Overall Rating and Provide Summary Comments

- Review ratings for Dimensions I – IV adding/clarifying comments as needed.
- Write summary comments for your overall rating on your recording sheet.
- Total dimension ratings and record overall rating E, E/I, R, N – adjust as necessary.

If working in a group, individuals should record their overall rating prior to conversation.

Step 5 – Compare Overall Ratings and Determine Next Steps

- Note the evidence cited to arrive at final ratings, summary comments and similarities and differences among raters. Recommend next steps for the lesson/unit and provide recommendations for improvement and/or ratings to developers/teachers.

Additional Guidance for ELA/Literacy – When selecting text(s) that measure within the grade-level text complexity band and are of sufficient quality and scope for the stated purpose, see *The Common Core State Standards in English Language Arts/Literacy* at www.corestandards.org/ELA-Literacy; and the *Supplement for Appendix A: New Research on Text Complexity as well as Quantitative and Qualitative Measures* at www.achievethecore.org/steal-these-tools/text-complexity. See *The Publishers’ Criteria* for Grades K-2 and the same for Grades 3-12 at www.achievethecore.org/steal-these-tools.

Rating Scales

Note: Rating for Dimension I: Alignment is non-negotiable and requires a rating of 2 or 3. If rating is 0 or 1 then the review does not continue.

Rating Scale for Dimensions I, II, III, IV:

3: Meets most to all of the criteria in the dimension

2: Meets many of the criteria in the dimension

1: Meets some of the criteria in the dimension

0: Does not meet the criteria in the dimension

Descriptors for Dimensions I, II, III, IV:

3: Exemplifies CCSS Quality – meets the standard described by criteria in the dimension, as explained in criterion-based observations.

2: Approaching CCSS Quality – meets many criteria but will benefit from revision in others, as suggested in criterion-based observations.

1: Developing toward CCSS Quality – needs significant revision, as suggested in criterion-based observations.

Overall Rating for the Lesson/Unit:

E: Exemplar – Aligned and meets most to all of the criteria in dimensions II, III, IV **(total 11 – 12)**

E/I: Exemplar if Improved – Aligned and needs some improvement in one or more dimensions **(total 8 – 10)**

R: Revision Needed – Aligned partially and needs significant revision in one or more dimensions **(total 3 – 7)**

N: Not Ready to Review – Not aligned and does not meet criteria **(total 0 – 2)**

Descriptors for Overall Rating:

E: Exemplifies CCSS Quality – Aligned and exemplifies the quality standard and exemplifies most of the criteria across Dimensions II, III, IV of the rubric.

E/I: Approaching CCSS Quality – Aligned and exemplifies the quality standard in some dimensions but will benefit from some revision in others.

R: Developing toward CCSS Quality – Aligned partially and approaches the quality standard in some dimensions and needs significant revision in others.

EQuIP Student Work Protocol

The ultimate goal of the Common Core State Standards (CCSS) is to prepare all students with the knowledge and skills they need for postsecondary success. The EQuIP Student Work Protocol is designed to establish or articulate the relationship between student work and the quality and alignment of instructional materials that previously have been reviewed using the EQuIP quality review process. Focusing on this relationship enables educators to develop a common understanding of the challenging work required by the CCSS. Furthermore, analyzing this relationship will also assist in closing the gap between what students are learning and the expectations embodied in assignments, as well as verifying what students are being taught and what they have learned, remembered, and incorporated into their knowledge and skills. Common expectations will result in more equitable educational opportunities for students and deepen the existing foundation for collaboration among states and districts.

The specific objectives of this EQuIP Student Work Protocol are three-fold:

- To confirm that a lesson's or unit's assignment is aligned with the letter and spirit of the targeted Common Core State Standards.
- To determine how students performed on an assignment as evidence of how well designed the lesson/unit is.
- To provide criterion-based suggestions for improving the assignment and related instructional materials.

a) Where to find online:

To view and download the EQuIP Student Work Protocol and related training materials, please visit: www.achieve.org/equip

b) Who uses:

The EQuIP Student Work Protocol is designed for use by educators, instructional leaders and administrators.

c) Target materials:

The EQuIP Student Work Protocol is intended for use with instructional materials that have undergone an EQuIP review, received a rating of E or E/I, and then subsequently have been implemented in an instructional setting to produce samples of student work.

d) How to use:

This 5-step protocol begins with a team of reviewers (or a single reviewer) focusing on the assignment itself — the directions or prompt and any accompanying scoring guides. Reviewers identify the content and performances required by the assignment. Reviewers then analyze the standards actually targeted by the author of the lesson/unit and the content and performances they embody. Gaps in alignment are noted.

The process then turns to describing how students performed on the assignment and whether and how students demonstrated the expectations of the targeted standards. At the end of the review process, reviewers provide criterion-based feedback regarding improvements that could be made to both the assignment and related instructional materials.

Equip Student Work Protocol

Reviewer Name or ID: _____	Lesson/Unit Title: _____
Grade: _____	Content Area: _____
_____	Task Title: _____

Student work can be a strong indicator of the quality of instructional materials. The Equip Student Work Protocol is a process for analyzing student responses to tasks for the purpose of evaluating the quality of the task and its alignment to the Common Core State Standards (CCSS). The protocol focuses on the quality of a single task within a lesson or unit and is a complement to reviews of the full lesson or unit using the Equip Quality Review Rubrics.

The Objectives

- *To analyze student work from a task within a lesson or unit to establish evidence of task alignment with the targeted CCSS.*
- *To provide suggestions for improving the task and related instructional materials.*

The Task

The task for which student work samples are collected should come from a CCSS-aligned¹ lesson or unit. It should be clearly written, including all diagrams, charts, graphs, and/or visuals. To provide the best opportunity for high quality feedback, the developer or teacher should choose a task that is central to the learning goals of the lesson/unit. The teacher or developer should then collect, and submit for review, multiple samples of student work that represent a range of student performance.

The Steps

- Step 1:** Analyze the Task
- Step 2:** Examine Instructional Context and CCSS Alignment of the Task
- Step 3:** Analyze Individual Student Work
- Step 4:** Analyze the Collection of Student Work
- Step 5:** Provide Suggestions for Improving the Materials

The Collaborative Process

While a single reviewer can apply the protocol, a team of reviewers is preferred. Only when working as a team, can discussion and collaboration, so critical to the process, occur. Each member of a team should independently record his or her findings and observations prior to discussion. Then discussion should focus on understanding all reviewers' analyses of both the task and the students' responses. For each step in the process the guiding questions should be used to stimulate and inspire, rather than to limit, discussion. Reviewers new to this process are encouraged to pause for discussion with each step. More experienced reviewers might choose to complete all five steps before beginning discussion. The task/lesson/unit developer may, or may not, be a member of the review team.

¹ The [Equip Quality Review Rubrics](#) can be used to establish the quality and degree of alignment of a lesson or unit from which a task is selected.

Steps for the EQUIP Student Work Protocol

STEP 1: Analyze the Task.

The first step for a review team is to develop a focused understanding of the task itself. It is important to begin this process by analyzing what, precisely, the task is asking students to know and do.

- Record the grade, lesson/unit, and task title on the EQUIP Student Work Protocol Form.
- Use only the directions and prompts to analyze the requirements of the task without consulting the instructional context and supporting materials in the lesson/unit.
- Study the task thoroughly, making notes about its purpose and demands and noting apparent aligned standards. [For mathematics this requires actually working the problem(s) and answering the question(s) included in the task.]

Note: Reviewers should limit observations to what the task communicates about its purpose and demands. They will consider the instructional context, supporting materials, and scoring guidelines during Step 2. Throughout the process all discussions, observations, and recommendations should be based on evidence found in the student work, the task, and/or the lesson/unit.

Guiding Questions:

- What content and performance demands does the task make on students?
- What is the purpose of the task?
- Which CCSS seem to be targeted by the task?
- What types of student reasoning are required by the task?
- For mathematics: Which Standards for Mathematical Practice might be assessed by the task?
- For ELA: Are the complexity and nature of any associated texts appropriate for the task and grade level?

Note: If the task does not align to the CCSS, this process should be discontinued and feedback regarding the need for alignment should be provided to the developer.

Notes & Observations Regarding the Purpose and Demands of the Task:

STEP 2: Examine Instructional Context and CCSS Alignment of the Task.

After establishing a clear understanding of the nature and demands of the task, reviewers now look at the task in its instructional context. For this step reviewers should limit their analysis to the materials in the lesson/unit that support the teaching and learning of the required skills and knowledge. Student work samples will be analyzed individually in Step 3 and collectively in Step 4.

- Scan the entire lesson/unit noting its purpose, content, and organization.
- Notice the placement of the task within the context of the lesson/unit.
- Identify the standards targeted in the lesson/unit and compare to those identified by the reviewer(s) in Step 1.
- Examine the answer keys, scoring guidelines, and/or rubrics related to the task.

Alignment Descriptors: Use these descriptors in considering the quality and degree of the alignment between the targeted standards and the task.

Excellent	The task demands are clearly consistent with all aspects of the identified standard(s).
Strong	The task demands are consistent with the <i>most critical</i> aspects of the identified standard(s). However, some of the <i>less critical</i> aspects of the standard(s) may not be addressed (likely by design).
Weak	The task demands do NOT address the <i>most critical</i> aspects of the identified standard(s). However, some of the <i>less critical</i> aspects of the standard(s) are addressed.
No Alignment	The demands of the task do not match those of the identified standard(s).

Note: If the task is not aligned to the lesson’s targeted CCSS, but is aligned to other CC standards, this process might continue but with feedback to the developer regarding the correct standards for alignment.

Guiding Questions:

- Where does the task occur within the instructional sequence? What have students already learned from the lesson/unit when they approach the task? What will they learn after?
- Does the lesson/unit include sufficient and effective instruction and scaffolding leading up to the task?
- Do the expectations described in the scoring guidelines correspond with your analysis of the task in Step 1?
- Is the task central to the learning goals of the lesson/unit?
- Which standards targeted in the lesson/unit match the content and performance demands of the task? (For mathematics, include the Standards for Mathematical Practice.)
- Do the directions, prompts, and/or scoring guidelines for the task adequately provide or indicate opportunities for students to demonstrate the requirements of the targeted standard(s) for the task?

[Step 2 cont.]

Notes & Observations Regarding the Instructional Context and Alignment of the Task:

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STEP 3: Analyze Individual Student Work.

Examine the collected range of student responses to the task, first individually and then, in Step 4, as a group. Use the following chart to guide your analysis of each individual sample of student work, one sample for each row of the table. Use the questions at the top of each column to guide the review team's discussion of each individual student's response to the task:

Guiding Questions:

- What does the student's work demonstrate about his or her understanding of the task?
- What does the student's work demonstrate about his or her proficiency with the requirements of the targeted CCSS?
- What does the student's work demonstrate about the depth of his or her understanding and reasoning ability? *
- How does the application of the scoring guidelines/rubrics related to the task support an understanding of the student's proficiency?

**For ELA: This includes understanding any related texts and topics.
For math: This means understanding the context of the question(s) and/or proficiency with relevant Mathematical Practices.*

Student Work Analysis Chart

Student Work Sample	What does the student's work demonstrate about their understanding of the task?	What does the student's work demonstrate about their proficiency with the requirements of the targeted CCSS?	What does the student's work demonstrate about the depth of their understanding and reasoning ability?	How does the application of the scoring guidelines/rubrics related to the task support an understanding of the student's proficiency?
Student # ____				
Student # ____				
Student # ____				
Student # ____				

Note: For a collection of more than four samples of student work, print this page multiple times.

Step 4: Analyze the Collection of Student Work.

After each sample has been individually considered, analyze the whole collection of samples of student work, synthesizing the information in each column of the table used in Step 3. Use these questions to guide the review team’s discussion of the full collection of samples.

Guiding Questions:

- On what aspects of the task have students generally performed well?
- What are the most frequent and fundamental problems students appear to be having with the task? Are there common errors made across the collection of student work?
- What does the range of student work demonstrate about the clarity of the task, directions, and supporting materials?
- In what ways do the scoring guidelines/rubrics aid in the evaluation of student proficiency on the targeted standards?
- What do the patterns across multiple student work samples indicate about alignment of the task to the targeted standards?
- In what ways does the task allow (or not allow) students to demonstrate various levels of proficiency* with the targeted standards?
- Is there evidence of consistent levels of reasoning and understanding across the samples of student work?
- What does the pattern of student responses show about their understanding of the text or the mathematical context of the task?
- What are the implications of the findings for the collection of student work for further task development?

**Note: A range of student understanding of the requirements of the task and its targeted standards, from “proficient” to “deep conceptual understanding and reasoning,” might be evident in the student work.*

Notes and Observations Regarding the Patterns Across the Student Work Samples:

STEP 5: Provide suggestions for improvement.

Use insights from analysis of the task and student work to suggest improvements developers might make to the task, instructional context, supporting materials and/or scoring guidelines/rubrics. All observations and suggestions should be based on, and have cited, evidence found in the student work, the task, and/or the lesson/unit.

Guiding Questions:

- Are the task instructions clear to students? How could they be modified to increase student understanding of the task expectations?
- Is the task properly placed within the overall lesson/unit plan? What modifications to instructional context might improve student performance?
- Does the task allow a variety of students to demonstrate their own level of proficiency? What modifications might be made to the task to elicit evidence of various levels of proficiency?
- Do the task prompts, directions, and requirements provide students with a clear opportunity to demonstrate proficiency of the targeted standards? What modifications to the task might elicit better evidence of proficiency on the targeted standards?
- Does the task allow students to demonstrate deep understanding and reasoning about the related concepts, topics, or texts? What modifications to the task might allow students to demonstrate the deep reasoning and understanding?
- What modifications to scoring guidelines/rubrics would improve guidance for evaluating student proficiency on the targeted standards?

Suggestions for Improvement for the Task and the Lesson/Unit:

Section 4

Assessment Evaluation Tool (AET)

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Assessment Evaluation Tool (AET)

ELA/Literacy, Grades 3–12

Assessment Evaluation Tool

ELA/Literacy, Grades 3–12

This ELA/literacy AET is designed to help educators determine whether or not assessments and sets of assessments are aligned to the Shifts and major features of the Common Core State Standards (CCSS). The substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-english-language-arts/>) at the heart of the Common Core State Standards are:

- **Complexity:** Regular practice with complex text and its academic language
- **Evidence:** Reading, writing, and speaking grounded in evidence from text, both literary and informational
- **Knowledge:** Building knowledge through content-rich non-fiction

The AET draws directly from the following documents:

- Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects (<http://www.corestandards.org/ELA-Literacy/>)
- Publishers' Criteria for the Common Core State Standards in ELA/Literacy grades 3 – 12 (http://corestandards.org/assets/Publishers_Criteria_for_3-12.pdf)
- Supplement to Appendix A of the Common Core State Standards for ELA/Literacy: New Research on Text Complexity (www.corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf)

When to use the AET

1. Purchasing assessments: Many factors go into local purchasing decisions. Alignment to the Standards is a critical factor to consider. The AET is designed to evaluate alignment of

assessments and sets of assessments to the Shifts and the major features of the CCSS. It also provides suggestions of additional indicators to consider in the assessment evaluation and purchasing process.

2. Evaluating assessments in use: The AET can be used to analyze the degree of alignment of existing assessments and sets of assessments and help to highlight specific, concrete flaws in alignment. Even where assessments currently in use fail to meet one or more of these criteria, the pattern of failure is likely to be informative. States and districts can use the evaluation to create a thoughtful plan to modify assessments and sets of assessments in such a way that they better meet the requirements of the Standards.
3. Developing assessments: This tool can be used to provide guidance for and evaluation of alignment for creating locally developed assessments and sets of assessments. Those developing new aligned assessments should use the criteria within the AET to guide test blueprint construction, item specifications development, and item evaluation procedures.

Who Uses the AET

The AET is designed for use by educators and administrators including content specialists, assessment specialists, administrators and educators at the school, district or state level. Evaluating assessments and sets of assessments requires both subject-matter and technical expertise. Evaluators should be well versed in the Standards (<http://www.corestandards.org/ELA-Literacy/>) for all grades in which assessments are being evaluated. Evaluators also should be familiar with the substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-english-language-arts/>) of Complexity, Evidence and Knowledge that are listed above. If possible, it would be helpful if at least one member of the evaluation team is well versed in ELA/literacy assessment.

Getting Started

Prior to Evaluation

Assemble all of the materials necessary for the evaluation, e.g., test forms, test blueprints, test item metadata, item bank summaries, sample score reports. It is essential to have materials for all grades covered by the assessment program, as some criteria cannot be rated without having access to each grade. In addition, each evaluator should have a reference copy of the Common Core State Standards for ELA/Literacy and the Publishers' Criteria for the Common Core State Standards in ELA/Literacy grades 3 – 12.

Sections 1 – 3 below should be completed to produce a comprehensive picture of the strengths and weaknesses of the assessments under evaluation. Information about areas in need of improvement should be shared with internal and external stakeholders.

Navigating the Tool

The AET contains criteria for five ELA/literacy domains: Reading, Writing, Language, and Speaking and Listening. Assessments do not have to contain all of the ELA/literacy domains in order to be evaluated with the AET or to align with the CCSS. Choose the Non-Negotiables and/or Alignment Criteria that apply to the assessments being evaluated.

If reading is being assessed*, begin with Section 1: Non-Negotiable Alignment Criteria (p. 220).

- The Non-Negotiable Alignment Criteria must each be met in full for reading assessments to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Non-Negotiable Alignment Criterion has three metrics associated with it; every one of these metrics must be met in order for the criterion as a whole to be met.
- Examine the relevant materials and use evidence to rate the materials against each criterion and its associated metrics.
- Record and explain the evidence upon which the rating is based.

Continue to Section 2: Alignment Criteria (p. 230).

- The Alignment Criteria for the domains covered by the assessment program under evaluation must each be met for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Alignment Criterion has two or more metrics associated with it; a specific number of these metrics must be met or partially met in order for the criterion as a whole to be met.
- The domains covered within the Alignment Criteria section are: Reading, Writing, Language, and/or Speaking and Listening.
- Examine the materials in relation to the relevant criteria, assigning each metric a point value. Rate each criterion as “Meets” or “Does Not Meet” based on the number of points assigned. The more points the materials receive on the alignment criteria, the better they are aligned.
- Record and explain the evidence upon which the rating is based.

Complete Section 3: Evaluation Summary (p. 259).

- Compile all of the results from Sections 1 and 2 to determine if the assessments are aligned to the Shifts and major features of the CCSS.

Proceed to Section 4: Indicators of Quality (p. 261).

- Indicators of Quality are important considerations that will help evaluators better understand the overall quality of an assessment program. These considerations are not criteria for alignment to the CCSS, but they provide valuable information about additional program characteristics, such as ensuring accessibility for all students. Evaluators may want to add their own indicators to the examples provided.

NOTE: The word “text” has been used to apply to written, audio, video, and quantitative stimuli. The AET should be applied to non-print materials as appropriate.

* It is assumed that reading will be a significant component of most assessment systems subject to evaluation. When an assessment does not include Reading, the Alignment Criteria for the domains being evaluated (Writing, Language, Speaking and Listening) should be used.

Directions for Non-Negotiable 1

Reading – Complexity and Quality of Texts

Non-Negotiable 1: Texts are worthy of student time and attention; they have the appropriate level of complexity for the grade, according to both quantitative and qualitative analyses of text complexity.

Required Materials

- The texts in the test forms for each grade level or (for an item bank) a random sample of texts for each grade level
- Metadata accompanying the texts, especially quantitative and qualitative analyses of text complexity and copyright acknowledgements

Rating this Criterion

The assessments should be rated for each of the following three metrics as Meets or Does Not Meet. If any one of the metrics is rated as Does Not Meet, then the assessments fail Non-Negotiable 1. If all metrics are rated as Meets, the assessments pass this Non-Negotiable.

Whether the assessments are rated as Meets or Does Not Meet, provide specific examples of evidence in support of the ratings, including evidence of any specific gaps in the assessments.

Non-Negotiable 1

Reading – Complexity and Quality of Texts

Metric

NN Metric 1A:

At least 90% of texts used for assessment are placed within the grade band indicated by a quantitative analysis, with the average complexity of texts increasing grade-by-grade. Exceptions—in which the text is placed above the indicated grade band—are usually reserved for literary texts in the upper grades. When materials are published, the quantitative data accompany the materials.

Procedure for Evaluation

Every text should be accompanied by data from at least one research-based quantitative tool for grade band placement (poetry and drama excepted). The same tool(s) should be used consistently across the grade levels.

If quantitative data is not available, evaluators should obtain a Lexile or other rating for the text (see <http://achievethecore.org/text-complexity>).

For each grade, examine the metadata or other explanatory materials accompanying either the texts on the test form(s) or a representative sample of at least three literary and three informational texts from the item bank.

Make a list of each text title and the grade to which it has been assigned; group by grade band. Note the grade band indicated by the quantitative tool(s) and the actual grade band placement.

Calculate an overall percentage of the texts that have been placed at or below the grade band indicated by the quantitative data, allowing exceptions for literary texts as appropriate.

Evidence

Rating

- Meets
- Does Not Meet

Non-Negotiable 1

Reading – Complexity and Quality of Texts

Metric

NN Metric 1B:

At least 90% of texts used for assessment are placed within the grade level indicated by a qualitative analysis. When materials are published, the qualitative analysis accompanies the materials.

Procedure for Evaluation

Every text should be accompanied by a qualitative analysis for grade level placement (including poetry and drama).

If a qualitative analysis is not available, evaluators should do a brief analysis using a format like the one at <http://achievethecore.org/qualitative-text-analysis>.

For each grade, examine the qualitative analyses in the metadata or other explanatory materials accompanying the same texts from Non-Negotiable 1A above. Note the grade level indicated by the qualitative tools and the actual grade level placement.

Calculate an overall percentage of the texts that have been placed at the grade level indicated by the qualitative analysis.

Evidence

Rating

- Meets
- Does Not Meet

Non-Negotiable 1

Reading – Complexity and Quality of Texts

Metric

NN Metric 1C:

At least 95% of texts used for assessment are of publishable quality—preferably previously published but at minimum edited by professional publication editors (not only assessment editors). History/social studies and science/technical texts, specifically, reflect the quality of writing that is produced by authorities in the particular academic discipline.

Procedure for Evaluation

All texts should be high quality and content rich—worthy of student attention. Nearly all texts should be previously published rather than “commissioned” because published texts have been selected and edited by professional publication editors.

For each grade, examine the metadata or other explanatory materials accompanying the same texts from Non-Negotiable 1A above.

Look for an acknowledgment line for each text (usually found at the front of the test booklet or below the text), which cites an author or publisher and date of publication, or look for a statement that the text has been edited by a professional publication editor.

Label the texts that are accompanied by an acknowledgment line or are shown to have been edited professionally.

Identify any texts that do not represent quality literary or informational writing.

Calculate the percentage of texts that are not of publishable quality.

Evidence

Rating

- Meets
- Does Not Meet

Non-Negotiable 1

Reading – Complexity and Quality of Texts

Non-Negotiable 1: Texts are worthy of student time and attention; they have the appropriate level of complexity for the grade, according to both quantitative and qualitative analyses of text complexity.

Rating for Non-Negotiable 1

If all three metrics above were rated as Meets, then rate Non-Negotiable 1 as Meets. If one or more of the metrics were rated as Does Not Meet, then rate Non-Negotiable 1 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

- Meets
- Does Not Meet

Strengths / Weaknesses:

Before moving to Non-Negotiable 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 259.

Directions for Non-Negotiable 2

Reading – Text-Dependent and Standards-Based Questions

Non-Negotiable 2: High-quality reading test questions are text-dependent and Standards-based; they require students to read closely, find the answers within the text, and use textual evidence to support responses.

Required Materials

- The test questions in the test forms for each grade level or (for an item bank) a representative sample of test questions
- Metadata accompanying the test questions, showing the alignment of each question to the CCSS

Rating this Criterion

The assessments should be rated for each of the following three metrics as Meets or Does Not Meet. If any one of the metrics is rated as Does Not Meet, then the assessments fail Non-Negotiable 2. If all metrics are rated as Meets, the assessments pass this Non-Negotiable.

Whether the assessments are rated as Meets or Does Not Meet, provide specific examples of evidence in support of the ratings, including evidence of any specific gaps in the assessments.

Non-Negotiable 2

Reading – Text-Dependent and Standards-Based Questions

Metric

NN Metric 2A:

At least 90% of the questions are text dependent: they require close reading and analysis of the text, focus on its central ideas and important particulars, and require answers based on what is in (not outside) the text.

Procedure for Evaluation

Questions should require thoughtful reading of the text, not just skimming or superficial consideration. As a set, questions should enable students to demonstrate deep understanding of the unique aspects of the text. Students should be able to answer the questions correctly without prior knowledge. Questions should be derived from a reading text (i.e., not “stand alone” questions).

For each grade, examine either the test questions on the test form(s) or a representative sample of at least 15 questions based on literary texts and 15 based on informational texts per grade in the item bank.

Identify the questions that do not meet this metric: List the sequence numbers of any questions that do not require close reading and analysis, e.g., the questions assess simple recall or minor textual points. List the sequence numbers of any questions that, as a set, focus on peripheral aspects of the text, failing to permit students to demonstrate deep understanding of the text. List the sequence numbers of any questions that call on students’ prior knowledge or are “stand-alone” questions.

Calculate percentages of test questions that do not meet the metric.

Evidence

Rating

- Meets
- Does Not Meet

Non-Negotiable 2

Reading – Text-Dependent and Standards-Based Questions

Metric

NN Metric 2B:

At least 90% of test questions reflect the range of cognitive demand required by the Standards.

Procedure for Evaluation

At every grade level, the Standards should be assessed with items that reflect a range of rigor and cognitive demand, depending on the requirements of individual Standards. Questions should reflect this range at each grade, always avoiding simple recall or surface analysis.

For each grade, examine the same test questions from Non-Negotiable 2A above.

List the sequence numbers of any questions that do not rise to the range of cognitive demand or rigor required by individual Standards.

Calculate a percentage of test questions that do not meet this metric.

Evidence

Rating

- Meets
- Does Not Meet

Non-Negotiable 2

Reading – Text-Dependent and Standards-Based Questions

Metric

NN Metric 2C:

At least 90% of test questions assess the specifics of the Standards at each grade level (not just the Anchor Standards) and do not employ “generic” answer choices applicable to any text.

Procedure for Evaluation

Questions should assess the specific requirements delineated by the Standards. For example, if a Standard requires a focus on two central ideas, two ideas should be assessed; if a Standard calls for the meaning of figurative language, meaning should be assessed, not literary terms like *metaphor* or *personification*.

Questions should not be aligned only to Anchor Standards. Multiple-choice or technology-enhanced items should be text-specific, not relying on “generic” choices (e.g., “to inform,” “to persuade,” “to entertain”) that could be used for any text. Not every Standard must be assessed with every text.

For each grade, examine the test questions assembled under Non-Negotiable 2A above, along with their metadata. Identify the questions that do not meet this metric: List the sequence numbers of any questions that fail to assess the specific requirements of the Standards at the grade level. List the sequence numbers of any questions that are aligned only to the Anchor Standards. List the sequence numbers of any questions that provide “generic” answer choices that could be used for any text.

Calculate percentages of questions that do not meet the metric.

Evidence

Rating

- Meets
- Does Not Meet

Non-Negotiable 2

Reading – Text-Dependent and Standards-Based Questions

Non-Negotiable 2: High-quality reading test questions are text-dependent and Standards-based; they require students to read closely, find the answers within the text, and use textual evidence to support responses.

Rating for Non-Negotiable 2

If all three metrics above were rated as Meets, then rate Non-Negotiable 2 as Meets. If one or more of the metrics were rated as Does Not Meet, then rate Non-Negotiable 2 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

- Meets
- Does Not Meet

Strengths / Weaknesses:

Before moving to the Alignment Criteria, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 259.

Now continue by evaluating the Alignment Criteria 1-4 for Reading.

Directions for Alignment Criterion 1

Reading – Range of Texts

Alignment Criterion 1: Texts reflect the distribution of text types and genres required by the reading Standards.

Required Materials

- The texts in the test forms for each grade level or (for an item bank) a random sample of texts for each grade level
- Metadata accompanying the texts, especially quantitative and qualitative analyses of text complexity and copyright acknowledgments
- The test questions in the test forms for each grade level or (for an item bank) a representative sample of test questions
- Metadata accompanying the test questions, showing the alignment of each question to the CCSS
- Test blueprints and other explanatory material focused on test design, including sample score reports if available

Core State Standards. The more points the materials receive on the Alignment Criterion, the better the materials are aligned.

Evaluators should provide examples of evidence in support of the numerical rating for each metric, including evidence of any specific gaps in the materials.

Rating this Criterion

Rate the assessments for each of the metrics for these Alignment Criteria as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). Then rate the Alignment Criteria as a group as Meets or Does Not Meet, based on the minimum number of points required. For the Alignment Criteria for reading, materials must earn at least 16 of 20 points to align to the Shifts and major features of the Common

Alignment Criterion 1

Reading – Range of Texts

Metric

AC Metric 1A:

In 100% of the grades, the texts on reading assessments or in an item bank approximate the distributions of literary and informational texts as required by the Standards:

- In grades 3 – 8, there is a distribution of approximately 50%/50% literary and informational texts.
- In grades 9 – 12, there is a distribution of approximately 33% literary and 66% informational texts.

If the above metric is met, assign the materials 2 points. If 2 of the 3 grades within a grade band approximate the above distributions, assign 1 point.

Procedure for Evaluation

At all grades, the proportions of literary vs. informational text should reflect the emphases in the Standards.

For each grade, examine the metadata accompanying either the texts on the test form(s) or blueprints or a random sample of at least 12 texts per grade.

List the texts and write “literary” or “informational” next to the title of each text. In accordance with the Standards, classify literary nonfiction texts as informational.

Calculate the percentages of literary vs. informational texts for each grade.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Reading – Range of Texts

Metric

AC Metric 1B:

At least 90% of the literary and informational texts represent the genres and text characteristics that are specifically required by the reading Standards at each grade level.

If the above metric is met, assign the materials 2 points. If 60% to 90% of the texts meet the specific requirements of the Standards at each grade, assign 1 point.

Procedure for Evaluation

At all grades, text types should match the Standards (e.g., specific genres and subgenres of fiction and nonfiction, foundational or seminal documents).

For each grade, examine the metadata accompanying the same texts as those used to evaluate the metrics in Non-Negotiable 1 above.

Write the genre or type next to each text on the list (e.g., “story,” “poem,” “literary nonfiction,” “science/technical,” “history/social studies”).

Compare the text characteristics to those required by the Standards at each grade and identify any texts that do not match the characteristics for that grade.

Calculate percentages.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Reading – Range of Texts

Metric

AC Metric 1C:

Informational texts, specifically, meet the requirements of the Standards. At all grades, more than half of the informational texts utilize expository, rather than narrative, structures. In grades 6 – 12, the informational texts are balanced among history/social studies texts, science/technical texts, and literary nonfiction.

If the above metric is met, assign the materials 2 points. If one fourth to one half of the informational texts use expository rather than narrative structures and in grades 6 – 12 the informational texts include some history/ social studies, some science/technical, and some literary nonfiction, assign 1 point.

Procedure for Evaluation

The ability to understand complex informational texts with expository structures is important for college and career readiness, as is the ability to understand complex informational texts within a variety of disciplines.

For each grade, note the primary structures in the informational texts in the list of texts used to evaluate the metrics in Non-Negotiable 1 above.

For grades 6 – 12, note the subject matter for the informational texts used to evaluate the metrics in Non-Negotiable 1 above.

Calculate whether more than half of the informational texts primarily use expository structures and in grades 6 – 12 whether there is a balance among history, science, and literary nonfiction.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Directions for Alignment Criterion 2

Reading – Assessing Vocabulary

Alignment Criterion 2: Because of the importance of vocabulary acquisition and use to college and career readiness, vocabulary questions comprise a significant part of ELA/literacy assessments, assess tier 2 words in context, and focus on central ideas in the text.

Required Materials

- The texts in the test forms for each grade level or (for an item bank) a random sample of texts for each grade level
- Metadata accompanying the texts, especially quantitative and qualitative analyses of text complexity and copyright acknowledgments
- The test questions in the test forms for each grade level or (for an item bank) a representative sample of test questions
- Metadata accompanying the test questions, showing the alignment of each question to the CCSS
- Test blueprints and other explanatory material focused on test design, including sample score reports if available

Core State Standards. The more points the materials receive on the Alignment Criterion, the better the materials are aligned.

Evaluators should provide examples of evidence in support of the numerical rating for each metric, including evidence of any specific gaps in the materials.

Rating this Criterion

Rate the assessments for each of the metrics for these Alignment Criteria as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). Then rate the Alignment Criteria as a group as Meets or Does Not Meet, based on the minimum number of points required. For the Alignment Criteria for reading, materials must earn at least 16 of 20 points to align to the Shifts and major features of the Common

Alignment Criterion 2

Reading – Assessing Vocabulary

Metric

AC Metric 2A:

At least 66% of vocabulary items emphasize the academic language that is crucial for readiness, and at least 90% require use of context to determine meaning.

If the above metric is met, assign the materials 2 points. If 40% to 66% of vocabulary items emphasize academic language, assign 1 point.

Procedure for Evaluation

Most of the vocabulary items on assessments and in an item bank should assess academic vocabulary (tier 2) words or phrases in context. The remaining vocabulary items should assess other kinds of words named in the Standards (e.g., figurative and domain-specific language).

For each grade, examine either the vocabulary questions on the test form(s) or a representative sample (at least 15 vocabulary questions per grade) in the item bank.

List the sequence numbers of the questions that do not assess academic language (tier 2) words or phrases in context.

Calculate percentages.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Reading – Assessing Vocabulary

Metric

AC Metric 2B:

At least 90% of vocabulary items assess words or phrases that are important to central ideas of the text.

If the above metric is met, assign the materials 2 points. If 50% to 90% of vocabulary items assess words or phrases important to central ideas, assign 1 point.

Procedure for Evaluation

Vocabulary items on assessments and in an item bank should target words and phrases that are significant to the meaning of the text, not just unusual or interesting turns of phrase. The tested words or phrases should help students gain an understanding of the central ideas of a text, giving students a significant “payoff” when they determine the meaning.

For each grade, examine the vocabulary test questions assembled for Alignment Criterion 2A above.

List the sequence numbers of the questions that do not assess words that are important to the central ideas of the text.

Calculate percentages.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Reading – Assessing Vocabulary

Metric

AC Metric 2C:

Vocabulary questions comprise a sufficient part of ELA/literacy assessments—at least 8 score points per test (which is a generally accepted minimum for a reporting category).

If the above metric is met, assign the materials 2 points. If 5 – 7 score points are given to vocabulary questions, assign 1 point.

Procedure for Evaluation

At each grade, each assessment should include a sufficient number of points for vocabulary so that vocabulary could be a reporting category. Providing a reporting category for vocabulary is desirable but is not required.

For each grade, examine either the test blueprints or other test specifications

Determine the number of score points devoted to vocabulary per grade.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Directions for Alignment Criterion 3

Reading – Aligned Use of Item Types

Alignment Criterion 3: A variety of item types is used to appropriately and strategically assess the Standards.

Required Materials

- The texts in the test forms for each grade level or (for an item bank) a random sample of texts for each grade level
- Metadata accompanying the texts, especially quantitative and qualitative analyses of text complexity and copyright acknowledgements
- The test questions in the test forms for each grade level or (for an item bank) a representative sample of test questions
- Metadata accompanying the test questions, showing the alignment of each question to the CCSS
- Test blueprints and other explanatory material focused on test design, including sample score reports if available

Core State Standards. The more points the materials receive on the Alignment Criterion, the better the materials are aligned.

Evaluators should provide examples of evidence in support of the numerical rating for each metric, including evidence of any specific gaps in the materials.

Rating this Criterion

Rate the assessments for each of the metrics for these Alignment Criteria as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). Then rate the Alignment Criteria as a group as Meets or Does Not Meet, based on the minimum number of points required. For the Alignment Criteria for reading, materials must earn at least 16 of 20 points to align to the Shifts and major features of the Common

Alignment Criterion 3

Reading – Aligned Use of Item Types

Metric

AC Metric 3A:

Assessments employ at least one item type that requires students to write rather than select a response (brief or extended constructed-response or performance tasks), so that the depth and complexity of the Standards can be strategically addressed.

If the above metric is met, assign the materials 2 points. If the tests employ more than one item type but do not include an item type that requires students to write a response, assign 1 point.

Procedure for Evaluation

Tests that are well aligned (2 points) make use of an item type that requires writing rather than selecting a response (brief or extended constructed-response items or performance tasks). If additional item types are used, they may be selected-response in format.

Tests that are moderately aligned (1 point) do not offer constructed-response or performance tasks but make use of at least two different selected-response item types (e.g., multiple-choice, two-part evidence-based selected-response items, technology-enhanced items).

For each grade, examine the questions assembled for Non-Negotiable 2A above.

Determine which item types are being used. Note whether or not constructed-response items (either brief or extended) are included.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Reading – Aligned Use of Item Types

Metric

AC Metric 3B:

At least 50% of the score points on each assessment are derived from items that require students to directly provide evidence from the text to support answers, i.e., the items ask students to provide details (quotations or paraphrases) from the text in support of text-based claims or inferences.

If the above metric is met, assign the materials 2 points. If 30% to 50% of score points on each assessment are derived from items that require students to directly provide textual evidence, assign 1 point.

Procedure for Evaluation

Aligned tests emphasize reading and writing grounded in evidence from text, both literary and informational. Formats requiring direct use of evidence include:

- Constructed-response (CR), requiring students to use textual evidence in written responses
- Two-part evidence-based selected-response (EBSR), with one part asking for textual evidence
- Technology-enhanced (TE), requiring students to select or locate evidence within a passage
- One-part multiple-choice (MC) or TE with answer options consisting of textual details (e.g., actual quotations from the text)

For each grade, examine the questions assembled for Non-Negotiable 2A above, along with the passages on which the questions are based.

List the sequence numbers of the questions that require direct use of textual evidence.

Determine the number of score points.

Calculate percentages.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Reading – Aligned Use of Item Types

Metric

AC Metric 3C:

Research-focused performance tasks require students to analyze, synthesize, organize, and use information from sources; such tasks comprise a significant part of the assessments—at least 8 score points per test (which is a generally accepted minimum for a reporting category).

If the above metric is met, assign the materials 2 points. If research is assessed with aligned test questions instead of performance tasks and also offers at least 8 score points, assign 1 point. Assign 0 points if fewer than 8 score points are devoted to research skills. NOTE: Many well-aligned programs place research tasks within a writing assessment. If the materials being evaluated include research tasks, and the tasks are located in the writing assessment, the 2 points should still be awarded here.

Procedure for Evaluation

Aligned performance tasks are based on paired or multiple texts, and they measure one or more Standards that focus on research skills, e.g., Reading Standard 7, Reading Standard 9, Writing Standard 7.

Aligned test items are based on paired or multiple texts, and they specifically require students to analyze, synthesize, organize, and use information from sources (e.g., not merely identify a title of a likely source or a section in a table of contents).

For each grade, determine if there is sufficient coverage of research and if the questions meet this metric:

- Examine either the test blueprints or other test specifications.
- Determine whether or not there are at least 8 score points devoted to research tasks or test questions.
- Examine the questions labeled as assessing research.
- Determine whether or not the questions require analysis, synthesis, organization, and use of information rather than simple identification.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Directions for Alignment Criterion 4

Reading – Test Blueprints and Score Reports

Alignment Criterion 4: Test blueprints and the corresponding score reports reflect the focus of the Standards.

Required Materials

- The texts in the test forms for each grade level or (for an item bank) a random sample of texts for each grade level
- Metadata accompanying the texts, especially quantitative and qualitative analyses of text complexity and copyright acknowledgements
- The test questions in the test forms for each grade level or (for an item bank) a representative sample of test questions
- Metadata accompanying the test questions, showing the alignment of each question to the CCSS
- Test blueprints and other explanatory material focused on test design, including sample score reports if available

Core State Standards. The more points the materials receive on the Alignment Criterion, the better the materials are aligned.

Evaluators should provide examples of evidence in support of the numerical rating for each metric, including evidence of any specific gaps in the materials.

Rating this Criterion

Rate the assessments for each of the metrics for these Alignment Criteria as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). Then rate the Alignment Criteria as a group as Meets or Does Not Meet, based on the minimum number of points required. For the Alignment Criteria for reading, materials must earn at least 16 of 20 points to align to the Shifts and major features of the Common

Alignment Criterion 4

Reading – Test Blueprints and Score Reports

Metric

AC Metric 4A:

Test blueprints and score reports for reading tests are based on ELA/literacy domains that are research-based and instructionally actionable (not CCSS cluster headings).

If the above metric is met, assign the materials 2 points. If a majority of the reporting categories are research-based and actionable, assign 1 point.

Procedure for Evaluation

Potential reporting categories include: Reading, Writing, Reading Literature, Reading Informational Texts, Research, Vocabulary. This list is not exhaustive, and reading assessments can align to the CCSS without providing all of these categories, depending on the purpose of the test. However, such CCSS cluster headings as “Key Ideas and Details” or “Craft and Structure” are not appropriate for use as reporting categories, as they were not designed to provide research-based instructionally actionable guidance.

For each grade, examine either the test blueprints, other test specifications or sample score reports.

Determine and evaluate the names of the reporting categories and sub-categories.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Reading – Test Blueprints and Score Reports

Metric

AC Metric 4B:

Test blueprints balance total reading word count and item counts per test form with time allotted, so that students have sufficient time and purpose to read carefully and deeply. On average, passages have 7 to 10 score points each.

If the above metric is met, assign the materials 2 points. If testing time allows for some rereading and passages have an average of 5 to 6 score points each, assign 1 point.

Procedure for Evaluation

Aligned assessments do not overburden students with a large number of texts in a short time period and/or offer only a few score points for each text. Standards-based questions are designed to send students back to the text for rereading, and assessments should allow sufficient time. Also, item sets should be large and robust enough to provide an appropriate balance between the number of texts and numbers of questions, so that students are not asked to read a complex text but given only a few questions to answer.

For each grade, examine the following:

- The test form(s)
- The test blueprints
- The specifications for time allotted

Determine the ratio of passage sets to time allotted, judging if there is sufficient time for rereading the passages.

Calculate the average number of score points per passage.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criteria 1–4

Reading

Points Assigned for Alignment Criteria 1–4

Materials must earn at least 16 of 20 points to meet the Alignment Criteria 1 – 4 for reading. If materials earn fewer than 16 points, the Criteria have not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of these Criteria.

Rating

____ Total (20 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving on to the next Alignment Criterion, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 259.

Directions for Alignment Criterion 5

Writing – Writing to Sources

Alignment Criterion 5: Writing tasks reflect the writing types named in the Standards and require students to write to sources.

Required Materials

- The writing prompts, performance tasks, or constructed-response test questions in the test forms for each grade level or (for an item bank) a representative sample of writing prompts, performance tasks, or constructed-response test questions
- Metadata accompanying the prompts, tasks, or questions, showing the alignment of each to the CCSS
- Test blueprints and other explanatory material focused on test design, including sample score reports if available

Evaluators should provide examples of evidence in support of the numerical rating for each metric, including evidence of any specific gaps in the materials.

NOTE: Many well-aligned programs place research tasks within the reading assessment rather than the writing assessment. If the materials being evaluated include research tasks in the writing assessment, evaluate those tasks using Reading Alignment Criterion 3C.

Rating this Criterion

Rate the assessments for each of the metrics for this Alignment Criterion as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). Then rate the Alignment Criterion as a whole as Meets or Does Not Meet, based on the minimum number of points required. For the Alignment Criterion for writing, materials must earn at least 3 of 4 points to align to the Shifts and major features of the Common Core State Standards. The more points the materials receive on the Alignment Criterion, the better the materials are aligned.

Alignment Criterion 5

Writing – Writing to Sources

Metric

AC Metric 5A:

Taking all forms of the test together, 100% of writing tasks within a grade band approximate the balance of exposition, persuasion, and narrative required by the Standards (or blend writing types in similar proportions):

Grades 3-5: exposition 35%
 opinion 30%
 narrative 35%

Grades 6-8: exposition 35%
 argument 35%
 narrative 30%

High School: exposition 40%
 argument 40%
 narrative 0-20%

If the above metric is met, assign the materials 2 points. If narrative writing is greater than the indicated percentages but less than 50% of writing tasks, assign 1 point. If narrative tasks comprise more than 50% of writing tasks, assign 0 points.

Procedure for Evaluation

As students progress through the grades, an increasing focus on both argument and explanatory/informational writing is crucial for readiness.

For each grade band, examine either the writing tasks and/or constructed-response items on the Reading and Writing test form(s) or a representative sample (a minimum of 15 prompts or tasks) from the item bank for each grade band.

List the writing type for each task or item.

Calculate percentages of each of the three types of writing within each band.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 5

Writing – Writing to Sources

Metric

AC Metric 5B:

At least 90% of expository and argument/persuasive writing tasks require writing to sources — i.e., students confront text directly, draw on textual evidence, and support valid inferences from the text.

If the above metric is met, assign the materials 2 points. If 75% to 90% of expository and argument/persuasive prompts require writing to sources, assign 1 point.

Procedure for Evaluation

For expository and argument/persuasive prompts, students should be required to read texts and draw on textual evidence to support valid claims and inferences.

For each grade band, examine the writing items from Alignment Criterion 5A above.

List any prompts or tasks that do not require writing to sources.

Calculate the percentage of expository and argument/persuasive prompts requiring writing to sources within each band.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 5

Writing – Writing to Sources

Alignment Criterion 5: Writing tasks reflect the writing types named in the Standards and require students to write to sources.

Points Assigned for Alignment Criterion 5

Materials must earn at least 3 of 4 points to meet Alignment Criterion 5 for writing. If materials earn fewer than 3 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (4 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to the next Alignment Criterion, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 259.

Directions for Alignment Criterion 6

Language

Alignment Criterion 6: Test questions assessing conventions and writing strategies focus on the specifics of the Standards and reflect actual practice to the extent possible.

Required Materials

- The test questions in the test forms for each grade level or (for an item bank) a representative sample of test questions
- Metadata accompanying the questions, showing the alignment of each to the CCSS
- Test blueprints and other explanatory material focused on test design, including sample score reports if available

Rating this Criterion

Rate the assessments for each of the metrics for this Alignment Criterion as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). Then rate the Alignment Criterion as a whole as Meets or Does Not Meet, based on the minimum number of points required. For the Alignment Criterion for language, materials must earn at least 4 of 6 points to align to the Shifts and major features of the Common Core State Standards. The more points the materials receive on the Alignment Criterion, the better the materials are aligned.

Evaluators should provide examples of evidence in support of the numerical rating for each metric, including evidence of any specific gaps in the materials.

Alignment Criterion 6

Language

Metric

AC Metric 6A:

At least 90% of language score points are derived from questions that focus on the specifics of the language Standards for the grade, assessing common errors and skills important for readiness.

If the above metric is met, assign the materials 2 points. If at least 50% of language score points are derived from questions that assess common student errors and focus on the conventions and strategies most important for readiness, assign 1 point.

Procedure for Evaluation

Questions focused on English conventions and writing strategies should represent common student errors (not artificial or unlikely mistakes).

Questions should focus on the conventions most important for college and career readiness as indicated by the Standards (see “Language Progressive Skills, by Grade” (http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf)).

For each grade, examine either the language questions on the test form(s) or a representative sample (at least 15 language questions per grade) in the item bank.

List the sequence numbers of the questions that do not focus on the specifics of the Standards at each grade level or do not assess common errors.

Calculate percentages.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Language

Metric

AC Metric 6B:

At least 60% of language score points in the test blueprints are derived from students' written responses and/or technology-enhanced items that mimic actual editing, mirroring real-world activity as closely as possible.

If the above metric is met, assign the materials 2 points. If at least 40% of language score points in the test blueprints are derived from actual writing and/or technology-enhanced items that mimic actual editing, assign 1 point.

Procedure for Evaluation

Students should demonstrate language skills in the context of actual written composition, with use of conventions and writing strategies explicitly designated as part of the scoring rubric.

Alternately or in addition to actual writing, students should be asked to do editing or revision using technology-enhanced items that mimic actual editing and revision.

Using the list of items generated for Alignment Criterion 6A above, list the sequence numbers of the questions that do not mirror real-world activity.

Calculate percentages.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Language

Metric

AC Metric 6C:

Unless only reading and writing are being assessed, language skills questions comprise a sufficient part of ELA/literacy assessments—at least 8 score points per test (which is a generally accepted minimum for a reporting category).

If the above metric is met, assign the materials 2 points. If there are at least 6 language score points, assign 1 point.

Procedure for Evaluation

At each grade, each assessment should include a sufficient number of points for language skills so that language could be a reporting category. Providing a reporting category for language is desirable but is not required.

For each grade, examine either the test form(s) or the test blueprints.

Determine the number of test questions or score points devoted to language skills at each grade level.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 6

Language

Alignment Criterion 6: Test questions assessing conventions and writing strategies focus on the specifics of the Standards and reflect actual practice to the extent possible.

Points Assigned for Alignment Criterion 6

Materials must earn at least 4 of 6 points to meet Alignment Criterion 6 for language. If materials earn fewer than 4 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to the next Alignment Criterion, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 259.

Directions for Alignment Criterion 7

Speaking and Listening

Alignment Criterion 7: Test questions assessing speaking and listening reflect true communication skills required for college and career readiness.

Required Materials

- The test questions in the test forms for each grade level or (for an item bank) a representative sample of test questions
- Metadata accompanying the questions, showing the alignment of each to the CCSS
- Test blueprints and other explanatory material focused on test design, including sample score reports if available

Rating this Criterion

Rate the assessments for each of the metrics for this Alignment Criterion as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). Then rate the Alignment Criterion as a whole as Meets or Does Not Meet, based on the minimum number of points required. For the Alignment Criterion for speaking and listening, materials must earn at least 3 of 4 points to align to the Shifts and major features of the Common Core State Standards. The more points the materials receive on the Alignment Criterion, the better the materials are aligned.

Evaluators should provide examples of evidence in support of the numerical rating for each metric, including evidence of any specific gaps in the materials.

Alignment Criterion 7

Speaking and Listening

Metric

AC Metric 7A:

When speaking is being assessed, at least 75% of the test questions require active speaking tasks rather than selected-response or technology-enhanced items about speaking practices.

If the above metric is met, assign the materials 2 points. If at least 50% of the test questions require active speaking tasks, assign 1 point.

Procedure for Evaluation

Questions assessing speaking focus on students' ability to engage effectively in a range of conversations and collaborations. Students should be asked to express and support ideas clearly and effectively, probing ideas under discussion by building on others' ideas.

For each grade, examine either the speaking questions on the test form(s) or a representative sample (at least 15 speaking questions per grade) in the item bank.

List the sequence numbers of the questions that do not focus on the skills required for readiness and require active speaking.

Calculate percentages.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Speaking and Listening

Metric

AC Metric 7B:

When listening is being assessed, at least 75% of the test questions require active listening rather than selected-response or technology-enhanced items about listening practices.

If the above metric is met, assign the materials 2 points. If at least 50% of the test questions require active listening skills, assign 1 point.

Procedure for Evaluation

Students should be asked to express and support ideas clearly and effectively, probing ideas under discussion by building on others' ideas.

Students should also be asked to demonstrate such skills as taking notes on main ideas and asking relevant questions.

For each grade, examine either the listening questions on the test form(s) or a representative sample (at least 15 listening questions per grade) in the item bank.

List the sequence numbers of the questions that do not focus on the skills required for readiness and require active listening.

Calculate percentages.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 7

Speaking and Listening

Alignment Criterion 7: Test questions assessing speaking and listening reflect true communication skills required for college and career readiness.

Points Assigned for Alignment Criterion 7

If the assessments include both speaking and listening, materials must earn at least 3 of 4 points to meet the Alignment Criterion for speaking and listening. If materials earn fewer than 3 points, the criterion has not been met.

If the assessments include either speaking or listening, materials must earn at least 1 point to meet the Alignment Criterion. If materials do not receive at least 1 point, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (4 or 1 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Move to the Evaluation Summary on the following page to record the final Meets or Does Not Meet rating.

AET Evaluation Summary 1 of 2

ELA/Literacy, Grades 3–12

SECTION 4
Assessment Evaluation Tool (AET)
ELA/Literacy, Grades 3 -12

Title of Assessment: _____

Name of Evaluator(s): _____

Publisher: _____

Date of Evaluation: _____

Signature of Each Evaluator(s): _____

Non-Negotiable Alignment Criteria

Each Non-Negotiable must be met in order for the Non-Negotiable Alignment Criteria to be met overall. The Non-Negotiables apply to Reading assessments. If Reading is not intended to be part of the assessment, indicate N/A.

Non-Negotiable 1: Complexity of Texts

Meets N/A
 Does Not Meet

Non-Negotiable 2: Text-Dependent and Standards-Based Questions

Meets N/A
 Does Not Meet

Non-Negotiable Overall:

Meets
 Does Not Meet

Alignment Criteria

Each Alignment Criterion relevant to the assessments evaluated must be met with a sufficient number of points in order for the Alignment Criteria to be labeled as “Meets” overall. If a particular domain is not intended to be part of the assessment, indicate N/A for that criterion. The more points the materials receive on the relevant alignment criteria, the better they are aligned.

Alignment Criteria 1-4: Reading

Points: ____ of 20 possible.

(Materials must receive at least 16 of 20 points to align.)

Meets N/A
 Does Not Meet

Alignment Criterion 7: Speaking and Listening

Points: ____ of 4 possible.

(Materials that include both speaking and listening must receive at least 3 of 4 points to align; materials that assess either speaking or listening must receive at least 1 point.)

Meets N/A
 Does Not Meet

Alignment Criteria Overall:

Meets
 Does Not Meet

Alignment Criterion 5: Writing

Points: ____ of 6 possible.

(Materials must receive at least 3 of 4 points to align.)

Meets N/A
 Does Not Meet

Alignment Criterion 6: Language

Points: ____ of 6 possible.

(Materials must receive at least 4 of 6 points to align.)

Meets N/A
 Does Not Meet

AET Evaluation Summary 2 of 2

ELA/Literacy, Grades 3–12

SECTION 4
Assessment Evaluation Tool (AET)
ELA/Literacy, Grades 3 -12

Title of Assessment: _____

Name of Evaluator(s): _____

Publisher: _____

Date of Evaluation: _____

Signature of Each Evaluator(s): _____

Summary

If the materials meet both Non-Negotiables and relevant Alignment Criteria, they are aligned to the Shifts and major features of the CCSS.

Do the materials meet both Non-Negotiables and relevant Alignment Criteria?

Yes

No

What are the specific areas of strength and weakness based on this review?

Publishers or others modifying or developing assessments can use this information to make improvements and/or to remedy gaps in the alignment of assessment materials.

Indicators of Quality

Once an evaluation for alignment to the Shifts and major features of the CCSS has been conducted using Sections 1 – 3, it is important to evaluate for overall quality and best practices. A starting list of Indicators of Quality is suggested below, including critical considerations such as accessibility for all students. States, districts and others evaluating assessment options are encouraged to add to this list to ensure materials respect curricular choices and reflect local contexts. These indicators are designed to apply to assessment programs; and similar indicators are reproduced in the Quality Criteria Checklists, which are used to evaluate individual passages and test questions.

Indicators of Quality for Assessment Programs

Evidence

1. Assessments must provide accessibility to all students, including English learners and students with disabilities: The assessments should be developed in accordance with the principles of universal design and sound testing practice, so that the testing interface, whether paper- or technology-based, does not impede student performance. Allowable accommodations and modifications that maintain the constructs being assessed should be offered where appropriate.
2. Assessments should indicate progress toward college and career readiness: Scores and performance levels on assessments should be mapped to determinations of college and career readiness at the high school level, and for other grades, to being on track to college and career readiness by the time of high school graduation.
3. Assessments must be valid for required and intended purposes. As appropriate, assessments produce data, including student achievement data and student growth data, that can be used to validly inform individual student gains and performance and other purposes such as school effectiveness and improvement.
4. Assessments must be reliable: Assessments minimize error that may distort interpretations of results, describe the precision of the assessments at the cut scores, and are generalizable for the intended purposes.
5. Assessments should be designed and implemented to yield valid and consistent test score interpretations within and across years: Assessment forms yield consistent score meanings over time, forms within year, student groups, and delivery mechanisms (e.g., paper, computer, including multiple computer platforms), and score scales used facilitate accurate and meaningful inferences about test performance.

Indicators of Quality

Indicators of Quality for Texts Used in Reading Assessments

Evidence

1. Excerpts should convey a sense of completeness: When texts are excerpts from a larger work, they should begin and end logically and maintain the intent of the original. Edits for length should be made at the beginning or end of the piece, rather than in patchwork fashion.
2. Introductory material should include only the most necessary information. When the texts are presented with introductory material, the introduction should avoid summarizing or explaining the meaning of the text or giving students answers to questions.
3. Illustrations should add value. When texts include visual elements, the elements should be related to the central ideas of the text and provide important additional information.
4. Texts should fall within an acceptable range of word count. All texts should fall within an acceptable range for word count at the indicated grade level.
5. Paired or multiple texts should have a clear and meaningful relationship with each other. When texts are paired, the potential points of comparison should be significant (not superficial), such as theme, amount and quality of evidence, differences in emphasis, distinguishable structures, changes to derivative text.
6. For tasks that simulate research, one text should serve as an “anchor” text. When research tasks are presented, the first text in the set should provide foundational knowledge and lead naturally to additional reading and exploration.

Indicators of Quality

Indicators of Quality for Test Questions

Evidence

1. The language used in Reading items and Writing prompts should be clear and concise. The language in the items should reflect vocabulary and sentence structures appropriate to the grade level.
2. Selected-response items should be presented for review with rationales for all answer choices. The metadata for the selected-response items (multiple-choice or technology-enhanced) should provide a rationale for every answer option.
3. Selected-response items should exemplify high standards of technical quality. If items use a selected-response format, they should be free from internal clueing (e.g., the options should not repeat words in the stem; the grammatical relationship between stem and options should be correct for all options, the correct response should not be more specific than the options, the correct answer should not simply paraphrase words in the text). Also, the distractors should be plausible but incorrect (not unintended or arguable correct answers); general statements (e.g., central idea, theme, structure) should be precise and accurate; and inferences should be provable with specific textual evidence.
4. Constructed-response items should be presented for review with sample responses. The metadata for constructed-response items (brief and/or extended response) should provide a top score response or a sample response for every score point.
5. Constructed-response items should exemplify high standards of technical quality. If the items ask students to generate a written response, the description of the task should be clear enough that students know the characteristics of a successful response. Also, items that ask for a written response should be accompanied by information for students about the criteria for scoring.
6. Two-part items should exemplify high standards of technical quality. If items have two parts, the relationship between the two parts should be clear and logical, and there should be a plausible link between the options in the two parts.
7. Technology-enhanced items should exemplify high standards of technical quality. If items use computer delivery, they should use technology to approach the text in ways other item types cannot, providing value beyond that of non-technology-enhanced items. Also, the directions for use of technology should be clear and easy to follow.

Indicators of Quality

Indicators of Quality for Test Questions

8. Items that call for comparison or synthesis should focus on meaningful aspects of the texts. Questions that ask for comparison or synthesis should be related to central (rather than trivial) aspects of the text (e.g., amount and quality of evidence, differences in emphasis, distinguishable structures, changes to derivative text).
9. Graphic organizers used in items should be text-specific and add value. When items have graphic organizers or similar formats, the organizer should arise from characteristics of the text, i.e., it should not be a generic format that could apply to any text. The organizer or format should add value to the item by allowing students to demonstrate understanding of the text in a way that a traditional item would not.

Evidence

Indicators of Quality for Sets of Test Questions

1. As a whole, a set of items should allow students to demonstrate deep understanding of the text. Sets of items should require students to read the full text carefully and show their understanding of the central ideas, allowing and requiring students to provide deep insights rather than skim the surface.
2. As a whole, a set of items should cover the Standards that arise naturally from the unique aspects of the text. Sets of items should address as many different Standards as appropriate, with items based on the individual characteristics of the texts rather than on a forced standard coverage design.
3. As a whole, a set of items should be ordered in a logical and helpful manner (unless item order cannot be fixed, i.e., the items are delivered in an adaptive system or are collected in an item bank). Sets of items should begin and/or end with general questions about the text; questions about particulars of the text should be presented in the order the particulars appear in the text.

Evidence

Assessment Evaluation Tool (AET)

Mathematics, Grades K-12

Assessment Evaluation Tool

Mathematics, Grades K–12

This Math AET is designed to help educators determine whether assessments and sets of assessments are aligned to the Shifts and major features of the Common Core State Standards (CCSS). The substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-mathematics/>) at the heart of the Common Core State Standards in mathematics are:

- **Focus** strongly where the Standards focus
- **Coherence**: Think across grades and link to major topics within the grade
- **Rigor**: In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

The AET draws directly from the following documents:

- Common Core State Standards for Mathematics (www.corestandards.org/Math)
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf), and Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf).

When to use the AET

1. Purchasing assessments: Many factors go into local purchasing decisions. Alignment to the Standards is a critical factor to consider. This tool is designed to evaluate alignment of assessments and sets of assessments to the Shifts and the major features of the CCSS. It also provides suggestions of additional indicators to consider in the assessment evaluation and purchasing process.

2. Evaluating assessments in use: The AET can be used to analyze the degree of alignment of existing assessments and sets of assessments and help to highlight specific, concrete flaws in alignment. Even where assessments currently in use fail to meet one or more of these criteria, the pattern of failure is likely to be informative. States and districts can use the evaluation to create a thoughtful plan to modify assessments and sets of assessments in such a way that they better meet the requirements of the Standards.
3. Developing assessments: This tool can be used to provide guidance for and evaluation of alignment for creating locally developed assessments and sets of assessments. States and districts creating new aligned assessments and sets of assessments should use the criteria within the AET to guide the development of test blueprints, item specifications, and item review.

Who Uses the AET

The AET is designed for use by educators and administrators including content specialists, assessment specialists, administrators and educators at the school, district or state level. The AET is designed for use by educators and administrators including content specialists, assessment specialists, administrators and educators at the school, district or state level. Evaluating assessments and sets of assessments requires both subject-matter and technical expertise. Evaluators should be well versed in the Standards (www.corestandards.org/Math) for all grades in which assessments are being evaluated. This includes understanding the Major Work of the grade (www.achievethecore.org/focus) and the widely applicable pre-requisites in high school (www.achievethecore.org/prerequisites), the Supporting and Additional work, how the content fits into the progressions in the Standards (www.achievethecore.org/progressions), and the expectations of the Standards with respect to conceptual understanding, procedural skill and fluency, and application. Evaluators also should be familiar with the substantial instructional Shifts (<http://www.corestandards.org/other-resources/key-shifts-in-mathematics/>) of Focus, Coherence and Rigor that are listed above.

Getting Started

Prior to Evaluation

Assemble all of the materials necessary for the evaluation, e.g., test blueprints, item specifications, operational forms, test items, metadata for those items, score reports, etc. It is essential for evaluators to have materials for all grades covered by the assessment program, as some criteria cannot be rated without having access to each grade. In addition, each evaluator should have a reference copy of the Common Core State Standards for Mathematics and the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013), and the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Sections 1–3 below should be completed to produce a comprehensive picture of the alignment to the Shifts and major features of the CCSSM for the assessments under evaluation. Information about areas in need of improvement should be shared with internal and external stakeholders.

Navigating the Tool

Begin with Section 1: Non-Negotiable Alignment Criteria (p. 268)

- The Non-Negotiable Alignment Criteria must each be met in full for assessments to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Non-Negotiable Alignment Criterion has one or more metrics associated with it; every one of these metrics must be met in order for the criterion as a whole to be met.

- Examine the relevant assessments and use evidence to rate the materials against each criterion and its associated metric(s).
- Record and explain the evidence upon which the rating is based.

Continue to Section 2: Alignment Criteria (p. 278)

- The Alignment Criteria must each be met for assessments to be considered aligned to the Shifts and major features of the Common Core State Standards. Each Alignment Criterion has one or more metric associated with it; a specific number of these metrics must be met or partially met in order for the criterion as a whole to be met.
- Examine the assessments in relation to these criteria, assigning each metric a point value. Rate the criterion as “Meets” or “Does Not Meet” based on the number of points assigned. The more points the assessments receive on the Alignment Criteria, the better they are aligned.
- Record and explain the evidence upon which the rating is based.

Complete Section 3: Evaluation Summary (p. 298)

- Compile all of the results from Sections 1 and 2 to determine if the assessments are aligned to the Shifts and major features of the CCSS.

Proceed to Section 4: Indicators of Quality (p.300)

- Indicators of Quality are important considerations that will help evaluators better understand the overall quality of an assessment program. These considerations are not criteria for alignment to the CCSS, but they provide valuable information about additional program characteristics, such as ensuring accessibility for all students. Evaluators may want to add their own indicators to the examples provided.

Directions for Non-Negotiable 1

Focus on Major Work

Non-Negotiable 1: The large majority of points in each grade K–8 are devoted to the Major Work of the grade, and the majority of points in each high school course are devoted to widely applicable prerequisites.

Required Materials

- Test blueprints and operational forms
- “Focus by Grade Level” (achievethecore.org/focus) and the widely applicable prerequisites for postsecondary work (achievethecore.org/prerequisites).
- Publishers’ Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013, pp. 8) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- Publishers’ Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013, pp. 7) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf)
- Common Core State Standards for Mathematics (corestandards.org/wp-content/uploads/Math_Standards.pdf)

Evidence, then the assessments fail this Non-Negotiable. If the metrics is rated as Meets, then the assessments pass this Non-Negotiable.

If the metric is rated as Meets, provide specific examples of evidence of this. If the assessment Does Not Meet the metric, include evidence of specific gaps found in the materials. If the materials provide Insufficient Evidence, explain what is missing from the materials or what within the materials is unclear.

Rating this Criterion

The metric will be rated as Meets or Does Not Meet/Insufficient Evidence. If the metric is rated as Does Not Meet/Insufficient

Non-Negotiable 1

Focus on Major Work

Metric

NN Metric 1A:

For grades K–8, the assessment or set of assessments for each grade meet or exceed the following percentages:

- 85% or more of the total score points in the assessment(s) for each grade Kindergarten, 1, and 2 align exclusively to the Major Work of the grade.
- 75% or more of the total score points in the assessment(s) for each grade 3, 4, and 5 align exclusively to the Major Work of the grade.
- 65% or more of the total score points in the assessment(s) for each grade 6, 7, and 8 align exclusively to the Major Work of the grade.

For high school, the assessment or set of assessments for each course meet or exceed the following percentage:

50% or more of the total score points in each high school course assessment align to widely applicable prerequisites for postsecondary work.

Procedure for Evaluation

Familiarize yourself with the Major Work of the grade using the “Focus by Grade Level” documents and/or the widely applicable prerequisites using the “Widely Applicable Prerequisites” document.

Evaluate the blueprint or operational form(s) for each grade/course by counting the total number of points aligned to the Major Work of the grade or widely applicable prerequisites and divide by the total number of points on the test.

For context, read Criterion #1 in the Publishers’ Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) and Criterion #1 in the Publishers’ Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 1

Focus on Major Work

Non-Negotiable 1: The large majority of points in each grade K–8 are devoted to the Major Work of the grade, and the majority of points in each high school course are devoted to widely applicable prerequisites.

Rating for Non-Negotiable 1

If metrics were rated as Meets, then rate Non-Negotiable 1 as Meets. If one or more metrics were rated as Does Not Meet, then rate Non-Negotiable 1 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

- Meets
 Does Not Meet

Strengths / Weaknesses:

Before moving to Non-Negotiable 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 298.

Directions for Non-Negotiable 2

Freedom from Major Obstacles to Focus

Non-Negotiable 2: No item assesses topics directly or indirectly before they are introduced in the CCSSM.

Required Materials

- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013, pp. 9) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- Common Core State Standards for Mathematics (corestandards.org/wp-content/uploads/Math_Standards.pdf)
- Item specifications and operational forms or a representative sample of at least 20 operational items per grade/course
- “Focus by Grade Level” (achievethecore.org/focus) and the widely applicable prerequisites for postsecondary work (achievethecore.org/prerequisites).

If the metric is rated as Meets, provide specific examples of evidence of this. If the assessment Does Not Meet the metric, include evidence of specific gaps found in the materials. If the materials provide Insufficient Evidence, explain what is missing from the materials or what within the materials is unclear.

Rating this Criterion

The metric will be rated as Meets or Does Not Meet/Insufficient Evidence. If the metric is rated as Does Not Meet/Insufficient Evidence, then the assessments fail this Non-Negotiable. If the metrics is rated as Meets, then the assessments pass this Non-Negotiable.

Non-Negotiable 2

Freedom from Major Obstacles to Focus

Metric

NN Metric 2A:

100% of items on the assessment(s) assess knowledge of topics when they are introduced in the CCSSM.

Commonly misaligned topics include, but are not limited to:

- Probability, including chance, likely outcomes, probability models. (Introduced in the CCSSM in grade 7)
- Statistical distributions, including center, variation, clumping, outliers, mean, median, mode, range, quartiles; and statistical association or trends, including two-way tables, bivariate measurement data, scatter plots, trend line, line of best fit, correlation. (Introduced in the CCSSM in grades 6–8; see CCSSM for specific expectations by grade level.)
- Similarity, congruence, or geometric transformations. (Introduced in the CCSSM in grade 8)
- Symmetry of shapes, including line/reflection symmetry, rotational symmetry. (Introduced in the CCSSM in grade 4)

Procedure for Evaluation

Evaluate item specifications to see if content limits specify that the commonly misaligned topics listed in the metric are not assessed in grades prior to the grade introduced in the CCSSM.

Evaluate operational form(s) or a representative sample of at least 20 operational items per grade/course looking for commonly misaligned topics prior to the grade levels introduced by the CCSSM.

For context, read Criterion #2 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 2

Freedom from Major Obstacles to Focus

Non-Negotiable 2: No item assesses topics directly or indirectly before they are introduced in the CCSSM.

Rating for Non-Negotiable 2

If the metric was rated as Meets, then rate Non-Negotiable 2 as Meets. If metric was rated as Does Not Meet, then rate Non-Negotiable 2 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

- Meets
 Does Not Meet

Strengths / Weaknesses:

Before moving to Non-Negotiable 3, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 298.

Directions for Non-Negotiable 3

Test Items Reflect the Coherence of the Standards

Non-Negotiable 3: Test items elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted Standard(s), reflecting the coherence of the CCSSM.

Required Materials

- Test blueprints and operational forms or a representative sample of at least 20 operational items per grade/course
- Metadata accompanying the items, showing the alignment of each question to the CCSS
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013, pp. 13) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013, pp. 11 and 16) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf)
- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)
- “Focus by Grade Level” (achievethecore.org/focus) and the widely applicable prerequisites for postsecondary work (achievethecore.org/prerequisites).

Rating this Criterion

Each metric will be rated as Meets or Does Not Meet/Insufficient Evidence. If any metric is rated as Does Not Meet/Insufficient Evidence, then the assessments fail this Non-Negotiable. If all metrics are rated as Meets, then the assessments pass this Non-Negotiable.

If the metric is rated as Meets, provide specific examples of evidence of this. If the assessment Does Not Meet the metric, include evidence of specific gaps found in the materials. If the materials provide Insufficient Evidence, explain what is missing from the materials or what within the materials is unclear.

Non-Negotiable 3

Test Items Reflect the Coherence of the Standards

Metric

NN Metric 3A:

Items exhibit alignment to the CCSSM for the grade or course by directly reflecting the language of individual Standards. All, or nearly all, items aligned to a single Standard should assess the central concern of the Standard in question.

Procedure for Evaluation

Evaluate operational form(s) or a representative sample of at least 20 operational items for each grade/course to check the alignment to the Standards for Mathematical Content. NOTE: An example of evaluating this metric might include ensuring that items aligned to 6.EE.A.3 put an emphasis on applying properties of operations and generating equivalent expressions, not just mechanically simplifying.

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 3

Test Items Reflect the Coherence of the Standards

Metric

NN Metric 3B:

Assessments exhibit alignment to the CCSSM for that grade or course: Operational forms for each grade/course include items that directly assess multiple levels of the content hierarchy (i.e. standard, cluster, and domain).

Procedure for Evaluation

Evaluate blueprints or operational form(s) for each grade/course to see if one or more items assess at the cluster, domain, or grade level.

For context, read Criterion #6 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) and Criterion #4 in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets
- Does Not Meet / Insufficient Evidence

Non-Negotiable 3

Test Items Reflect the Coherence of the Standards

Non-Negotiable 3: Test items elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted Standard(s), reflecting the coherence of the CCSSM.

Rating for Non-Negotiable 3

If metrics were rated as Meets, then rate Non-Negotiable 3 as Meets. If one or more metrics were rated as Does Not Meet, then rate Non-Negotiable 3 as Does Not Meet. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

- Meets
- Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 1, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 298.

Now continue by evaluating Alignment Criterion 1 for Rigor and Balance.

Directions for Alignment Criterion 1

Rigor and Balance

Alignment Criterion 1: The Standards set expectations for attention to all three aspects of rigor: conceptual understanding, procedural skill and fluency, and applications. Thus, assessments must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

Required Materials

- Test blueprints and operational forms or a representative sample of at least 20 operational items per grade/course
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013, pp. 12-14) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013, pp. 9-10) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf)
- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)

criterion as a whole based on the number of minimum points required for each criterion. In order for this Alignment Criterion to be rated as Meets, the materials must receive at least 5 out of 6 points. Each metric is important and therefore no individual metric can be rated as Does Not Meet for the materials to be considered aligned to the Shifts and major features of the CCSSM. The more points the materials receive on the Alignment Criterion, the better they are aligned.

Rating this Criterion

Each metric will be rated as Meets (2 points), Partially Meets (1 point) or Does Not Meet (0 points). The ratings on those metrics are combined to form a Meets/Does Not Meet judgment for each

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1A: Balanced Assessment of Conceptual Understanding

Standards requiring conceptual understanding are explicitly listed in the blueprint(s) and assessed to ensure students have met these expectations.

(K–High School): At least 20% of the total points on the set of assessments for each grade or course explicitly require students to demonstrate conceptual understanding of key mathematical concepts, especially where called for in specific content Standards or cluster headings.

Procedure for Evaluation

Evaluate operational form(s) for each grade/course. Identify the items or parts of items that explicitly assess conceptual understanding, and add up those score points. Determine whether the sum represents at least 20% of the total points on the test. NOTE: Many of the items assessing these Standards should focus on conceptual understanding:

3.NF.A.1, 6.RP.A.2, 7.NS.A.1, A-REI.D.10

If operational form(s) are not available, this analysis may be done with test blueprints.

For context, read Criterion #4 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) and Criterion #2 in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1B: Balanced Assessment of Procedural Skill and Fluency

Standards requiring students to fluently compute are explicitly listed in the blueprint(s) and assessed to ensure students have met these expectations.

(K–High School): At least 20% of the total points on the set of assessments for each grade or course explicitly assess procedural skill and fluency.

Procedure for Evaluation

Evaluate operational form(s) for each grade/course. Identify the items that explicitly address fluency and/or procedural skill, and add the points for those items. Determine whether the sum represents at least 20% of the total points on the test. NOTE: These Standards should be assessed with an expectation for fluency at the appropriate grade level:

3.OA.C.7, 4.NBT.B.4, 5.NBT.B.5, 6.NS.B.2

If operational forms are not available, this analysis can be done with test blueprints.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1C: Balanced Assessment of Application

Standards requiring students to solve contextual problems are explicitly listed in the blueprint(s) and assessed to ensure students have met these expectations.

(K–5): At least 20% of the total points on the set of assessments for each grade explicitly assess solving single- or multi-step word problems.

(6–8): At least 25% of the total points on the set of assessments for each grade explicitly assess solving single- and multi-step word problems and simple models.

(High School): At least 30% of the total points on the set of assessments for each high school course explicitly assess single- and multi-step word problems, simple models, and substantial modeling/application problems.

Procedure for Evaluation

Evaluate the operational form(s) for each grade/course. Identify the items that explicitly address applications, and add the points for those items. Determine whether the sum represents at least 20% of the total points on the test. NOTE: Many of the items assessing these Standards should focus on application:

1.OA.A.2, 4.OA.A.3, 7.EE.B.3, A-REI.B.4

If operational forms are not available, this analysis can be done with test blueprints.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 1

Rigor and Balance

Alignment Criterion 1: The Standards set expectations for attention to all three aspects of rigor: conceptual understanding, procedural skill and fluency, and applications. Thus, assessments must reflect the balances in the Standards and help students meet the Standards’ rigorous expectations.

Rating for Alignment Criterion 1

Materials must earn at least 5 out of 6 points to meet Alignment Criterion 1. If materials earn fewer than 5 points, the criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

_____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 298.

Directions for Alignment Criterion 2

Emphasize the Progressions

Alignment Criterion 2: Assessments reflect the grade-by-grade progressions in the Standards.

Required Materials

- Operational forms or a representative sample of at least 20 operational items per grade/course
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013, pp. 12) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013, pp. 12) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf)
- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)

Criterion to be rated as Meets, the materials must receive at least 7 out of 8 points. Each metric is important and therefore no individual metric can be rated as Does Not Meet for the materials to be considered aligned to the Shifts and major features of the CCSSM. The more points the materials receive on the Alignment Criterion, the better they are aligned.

Rating this Criterion

Meets (2 points), Partially Meets (1 point) or Does Not Meet (0 points). The ratings on those metrics are combined to form a Meets/Does Not Meet judgment for each criterion as a whole based on the number of minimum points required for each criterion. In order for this Alignment

Alignment Criterion 2

Emphasize the Progressions

Metric

AC Metric 2A: Directly Reflect the Progressions

All, or nearly all, items exhibit alignment to the CCSSM for that grade or course by reflecting the progressions in the Standards. For example, multiplication and division items in grade 3 emphasize equal groups, with no rate problems (rate problems are grade 6 in CCSS).

Procedure for Evaluation

Evaluate operational form(s) for each grade/course or evaluate the same representative sample of operational items from Non-Negotiable 3A. Determine whether each item does or does not reflect the progressions. Count the number of items that do reflect the progressions to evaluate whether all or nearly all items reflect the progressions.

For context, read Criterion #5a in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013).

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Emphasize the Progressions

Metric

AC Metric 2B: Assessing Basic Content

Assessments include questions, tasks, and prompts about the basic content of the grade or course that are no more difficult than the Standards require.

Procedure for Evaluation

Evaluate operational form(s) for each grade/course or evaluate the same representative sample of operational items from Non-Negotiable 3A. Approximately 25% of items should be as easy as possible and consistent with the requirement of the Standards (e.g., $\frac{1}{2} + \frac{1}{3}$ is no more difficult than what 5.NF.A.1 requires).

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Emphasize the Progressions

Metric

AC Metric 2C: The numbers across each set of assessments are grade appropriate.

The items used across a grade/course reflect the full range of number systems expected in each grade/course.

Procedure for Evaluation

Evaluate operational form(s) for each grade/course or evaluate the same representative sample of operational items from Non-Negotiable 3A to determine whether each set of assessments reflects the full range of number systems expected at that grade/course. NOTE: Some examples to look for in evaluating this metric include items involving fractions greater than 1 in grade 3 and arithmetic and algebra items in the middle grades that use the rational number system, not just the integers.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Emphasize the Progressions

Metric

AC Metric 2D: Offering Coherent Representations

Where models are used, they are used consistently across grades and courses.

Procedure for Evaluation

Evaluate operational form(s) for each grade/course or evaluate the same representative sample of operational items from Non-Negotiable 3A to determine whether representations are used consistently across grades and courses. NOTE: Some examples to look for in evaluating this metric include the following: area models are used for multiplication of whole numbers and fractions in grades 3–6, number line models are used for representing order and magnitude of numbers in each grade 2–8, etc.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 2

Emphasize the Progressions

Alignment Criterion 2: Assessments reflect the grade-by-grade progressions in the Standards.

Rating for Alignment Criterion 2

Materials must earn at least 7 out of 8 points to meet Alignment Criterion 2. If materials earn fewer than 7 points, the criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

_____ Total (8 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Before moving to Alignment Criterion 3, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 298.

Directions for Alignment Criterion 3

Standards for Mathematical Practice

Alignment Criterion 3: The Standards require mathematical practices to be connected with mathematical content. Thus, assessments should demonstrate authentic connections between content Standards and practice Standards.

Required Materials

- Test blueprints and operational forms or a representative sample of at least 20 operational items per grade/course
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013, pp. 12-14) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013, pp. 12-14) (<http://achievethecore.org/publisherscriteria-math-hs>)
- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)

as Meets, the materials must receive at least 5 out of 6 points. Each metric is important and therefore no individual metric can be rated as Does Not Meet for the materials to be considered aligned to the Shifts and major features of the CCSSM. The more points the materials receive on the Alignment Criterion, the better they are aligned.

Rating this Criterion

Each metric will be rated as Meets (2 points), Partially Meets (1 point) or Does Not Meet (0 points). The ratings on those metrics are combined to form a Meets/Does Not Meet judgment for each criterion as a whole based on the number of minimum points required for each criterion. In order for this Alignment Criterion to be rated

Alignment Criterion 3

Standards for Mathematical Practice

Metric

AC Metric 3A: Aligning to the Standards for Mathematical Practice

All or nearly all alignments to practice Standards are accurate.

Procedure for Evaluation

Evaluate operational form(s) for each grade/course or evaluate the same representative sample of operational items from Non-Negotiable 3A to check the alignment to the Standards for Mathematical Practice. NOTE: Some examples to look for when evaluating this metric might include the following: a highly scaffolded problem should not be aligned to MP.1; a problem that directs a student to use a calculator should not be aligned to MP.5; and a problem about merely extending a pattern should not be aligned to MP.8.

For context, read Criterion #7 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) and Criterion #5 in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Standards for Mathematical Practice

Metric

AC Metric 3B: Addressing Every Standard for Mathematical Practice

The set of assessments for each grade or course assesses every Standard for Mathematical Practice at least once.

Procedure for Evaluation

Examine test blueprints to determine whether or not each Standard for Mathematical Practice is assessed in each grade/course. NOTE: There is no requirement to have an equal balance among the Standards for Mathematical Practice.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Standards for Mathematical Practice

Metric

AC Metric 3C: Expressing Mathematical Reasoning

There are multiple items in the set of assessment(s) for each grade or course that explicitly assess expressing and/or communicating mathematical reasoning.

Procedure for Evaluation

Examine operational form(s) for each grade/course and count the number of items requiring students to express/communicate mathematical reasoning.

For context, read Criterion #10 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) and Criterion #8 in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 3

Standards for Mathematical Practice

Alignment Criterion 3: The Standards require mathematical practices to be connected with mathematical content. Thus, assessments should demonstrate authentic connections between content Standards and practice Standards.

Rating for Alignment Criterion 3

Materials must earn at least 5 out of 6 points to meet Alignment Criterion 3. If materials earn fewer than 5 points, the criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (6 points possible)

Meets

Does Not Meet

Strengths / Weaknesses

Before moving to Alignment Criteria 4, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 298.

Directions for Alignment Criterion 4

Supporting Focus

Alignment Criterion 4: The assessment program supports the focus of the Standards by connecting concepts and presenting score report information in a manner that highlights the emphasis of the grade or course.

Required Materials

- Test blueprints and operational forms or a representative sample of at least 20 operational items per grade/course
- Score reports or score report documentation
- Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013, pp. 10) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_K-8_Spring_2013_FINAL1.pdf)
- Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013, pp. 8) (http://www.corestandards.org/wp-content/uploads/Math_Publishers_Criteria_HS_Spring_2013_FINAL1.pdf)
- Common Core State Standards for Mathematics (http://corestandards.org/wp-content/uploads/Math_Standards.pdf)

are combined to form a Meets/Does Not Meet judgment for each criterion as a whole based on the number of minimum points required for each criterion. In order for this Alignment Criterion to be rated as Meets, the materials must receive at least 3 out of 4 points. Each metric is important and therefore no individual metric can be rated as Does Not Meet for the materials to be considered aligned to the Shifts and major features of the CCSSM. The more points the materials receive on the Alignment Criterion, the better they are aligned.

Rating this Criterion

Each metric will be rated as Meets (2 points), Partially Meets (1 point) or Does Not Meet (0 points). The ratings on those metrics

Alignment Criterion 4

Supporting Focus

Metric

AC Metric 4A: Supporting Focus - Items

In grades K-8, assessment of Supporting Clusters enhances focus and coherence simultaneously by engaging students in the Major Work of the grade. In each grade, at least 50% of items aligned to Supporting Clusters simultaneously engage students in the Major Work of the grade.

In high school, assessments support focus by including items at a level of sophistication suitable to high school that involve application of knowledge and skills of key takeaways from grades 6-8.

Procedure for Evaluation

For grades K-8, examine at least 20 items aligned to Standards from Supporting Clusters for each grade and calculate the percentage of items sampled that simultaneously engage students in the Major Work of the grade.

For high school, examine operational forms for application items at a level of sophistication suitable to high school that involve key takeaways from grades 6-8.

For context, read Criterion #3 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K–8 (Spring 2013) and Table 1 on Page 8 of the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013), specifically the column titled "Applying Key Takeaways from Grades 6–8".

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Supporting Focus

Metric

AC Metric 4B: Supporting Focus – Score Reports

All score report information, including subscores, supporting text, and performance level descriptors, highlight the focus of the assessment(s) for each grade/course. They give instructionally valuable data and provide information about progress toward college and career readiness.

Procedure for Evaluation

Examine a score report or documentation about reporting to ensure that the score reports highlight both focus and college and career readiness.

Evidence

Rating

- Meets (2)
- Partially Meets (1)
- Does Not Meet (0)

Alignment Criterion 4

Supporting Focus

Alignment Criterion 4: The assessment program supports the focus of the Standards by connecting concepts and presenting score report information in a manner that highlights the emphasis of the grade or course.

Rating for Alignment Criterion 4

Materials must earn at least 3 out of 4 points to meet Alignment Criterion 4. If materials earn fewer than 3 points, the criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of this Criterion.

Rating

____ Total (4 points possible)

Meets

Does Not Meet

Strengths / Weaknesses:

Move to the Evaluation Summary on the following page to record the final Meets or Does Not Meet rating.

AET Evaluation Summary 1 of 2

Mathematics, Grades K–12

SECTION 4
Assessment Evaluation Tool (AET)
Mathematics, Grades K–12

Title of Assessment: _____

Name of Evaluator(s): _____

Publisher: _____

Date of Evaluation: _____

Signature of Each Evaluator(s): _____

Non-Negotiable Alignment Criteria

Each Non-Negotiable must be met in order for the Non-Negotiable Alignment Criteria to be met overall.

Non-Negotiable 1: Focus on Major Work

- Meets
 Does Not Meet

Non-Negotiable 2: Freedom from Major Obstacles to Focus

- Meets
 Does Not Meet

Non-Negotiable 3: Test Items Reflect the Coherence of the Standards

- Meets
 Does Not Meet

Non-Negotiable Overall:

- Meets
 Does Not Meet

Alignment Criteria

Each Alignment must be met with a sufficient number of points in order for Alignment Criteria to be labeled as Meets overall. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criteria 1: Rigor and Balance

Points: ____ of 6 possible.
(Materials must receive at least 5 of 6 points to align.)

- Meets
 Does Not Meet

Alignment Criteria 4: Supporting Focus

Points: ____ of 4 possible.
(Materials must receive at least 3 of 4 points to align.)

- Meets
 Does Not Meet

Alignment Criteria Overall:

- Meets
 Does Not Meet

Alignment Criteria 2: Emphasize the Progression

Points: ____ of 8 possible.
(Materials must receive at least 7 of 8 points to align.)

- Meets
 Does Not Meet

Alignment Criteria 3: Standards for Mathematical Practice

Points: ____ of 6 possible.
(Materials must receive at least 5 of 6 points to align.)

- Meets
 Does Not Meet

AET Evaluation Summary 2 of 2

Mathematics, Grades K–12

SECTION 4
Assessment Evaluation Tool (AET)
Mathematics, Grades K–12

Title of Assessment: _____

Name of Evaluator (s): _____

Publisher: _____

Date of Evaluation: _____

Signature of Each Evaluator (s): _____

Summary

If the materials meet every Non-Negotiable and Alignment Criterion, they are aligned to the Shifts and major features of the CCSS.

Do the materials meet every Non-Negotiable and Alignment Criteria?

Yes

No

What are the specific areas of strength and weakness based on this evaluation?

Publishers or those implementing assessment can use this information in order to make improvements and/or improve documentation to account for known gaps in the materials.

Indicators of Quality

Once an evaluation for alignment to the Shifts and major features of the CCSS has been conducted using Sections 1-3, it's important to evaluate for overall quality and best practices. A starting list of Indicators of Quality is suggested below, including critical considerations such as accessibility for all students. States, districts and others evaluating assessment options are encouraged to add to this list to ensure materials respect curricular choices and reflect local contexts. These indicators are designed to apply to assessment programs; and similar indicators are reproduced in the Quality Criteria Checklists, which are used to evaluate individual test questions.

Indicators

Evidence

1. Assessments must provide accessibility to all students, including English learners and students with disabilities: The assessments should be developed in accordance with the principles of universal design and sound testing practice, so that the testing interface, whether paper- or technology-based, does not impede student performance. Allowable accommodations and modifications that maintain the constructs being assessed should be offered where appropriate.
2. Assessments must be valid for required and intended purposes. As appropriate, assessments produce data, including student achievement data and student growth data that can be used to validly inform individual student gains and performance and other purposes such as school effectiveness and improvement.
3. Assessments must be reliable. Assessments minimize error that may distort interpretations of results, describe the precision of the assessments at the cut scores, and are generalizable for the intended purposes.
4. Assessments should be designed and implemented to yield valid and consistent test score interpretations within and across years. Assessment forms yield consistent score meanings over time, forms within year, student groups, and delivery mechanisms (e.g., paper, computer, including multiple computer platforms), and score scales used facilitate accurate and meaningful inferences about test performance.
5. Reflecting Strong Mathematical Content. The assessment items, answer keys, and supporting documentation are free from mathematical errors.
6. Constructing Forms Without Cueing Solution Processes. Item sequences do not cue the student to use a certain solution process during problem solving. Assessment(s) include problems requiring different types of solution processes within the same section.

Indicators of Quality

Indicators

7. Using Grade-Appropriate Presentation. The graphics, diagrams, and wording in each item are appropriate for students at that grade level.

8. Ensuring Forms Have Grade-Appropriate Reading Demands. The form as a whole (including directions, stimuli, items, etc.) has grade-appropriate readability levels.

9. Clear Scoring Materials and Procedures. For open-ended items, there are clear rubrics with exemplars that are valid for all possible solution paths. The procedure to use these materials to score student work is clear.

10. Calling for Variety in Student Work. Forms give many opportunities for students to produce a variety of responses. For example, items require students to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc. (Refer also to Criterion #9 in the Publishers' Criteria for the Common Core State Standards for Mathematics, Grades K-8 (Spring 2013) and Criterion #7 in the Publishers' Criteria for the Common Core State Standards for Mathematics, High School (Spring 2013).)

11. Utilizing a Variety of Ways to Present the Content. Items on operational forms present mathematical content in a variety of ways so that students must thoughtfully engage with various application contexts, mathematical representations, and structures of equations.

Evidence

Section 5

Assessment Passage & Item Quality Criteria Checklists

- 303** ELA/Literacy Passages, Grades 3–12
 - 304** Quality Checklist for Assessment Texts Worth Reading
 - 312** Quality Checklist for Assessment Questions Worth Asking
- 322** Mathematics, Grades K–12

Assessment Passage & Item Quality Criteria Checklists

ELA/Literacy Passages, Grades 3–12

Quality Checklist for Assessment Texts Worth Reading

Quality Checklist for Assessment Questions Worth Asking

Assessment Passage & Item Quality Criteria Checklist

ELA/Literacy Quality Checklist for Assessment Texts Worth Reading

The following checklist has been designed to help evaluators of ELA/literacy assessments determine if texts used to assess Reading and/or Writing align to the Common Core State Standards (CCSS).

The checklist has been set up in a gated manner so that evaluators can quickly determine if or whether a text aligns to, or strays from, the expectations of the CCSS. If a text does not pass the criteria in Section 1 and cannot be moved to a different grade, the text should be removed from consideration. If a text does pass the criteria in Section 1 or passes by being moved to a different grade, the text should be evaluated against the additional criteria in Section 2.

Use the center column to explain each determination. Have the Common Core State Standards for ELA/Literacy open for continual reference. At the end of Section 2, rate the text as Accepted, Accepted Conditionally, or Rejected.

In this document, the word “text” refers to all kinds of stimuli used in Reading and Writing assessments, as appropriate, e.g., printed texts, video, audio, charts, graphs.

Assessment Text Quality Criteria Checklist Section 1

For evaluation of individual texts and sets of texts: Each text must meet all of the following criteria. A text that does not pass the criteria in this section and cannot be moved to a different grade does not need to be evaluated further.

Criteria	Details	Evidence
<p>1.1 Quantitative measures of text complexity should determine grade-band placement: Has the text been placed within the grade band indicated by a quantitative analysis (with the exception of some literary texts written in simple style)?</p>	<p>Every text should be accompanied by specific evidence that it has been analyzed with at least one research-based quantitative tool for grade-band placement, with the exceptions of poetry and drama. If quantitative data is not available, evaluators should obtain a Lexile or other rating for the text (see http://achievethecore.org/text-complexity). Note that some literary texts, especially in high school, may be placed above the grade band indicated by quantitative data because of mature ideas and themes.</p>	<p>Rating:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Move (to grade ____)</p>
<p>1.2 Qualitative analyses of text complexity should determine grade level placement: Has the text been placed at the grade level indicated by a qualitative analysis?</p>	<p>Every text should be accompanied by specific evidence that it has been analyzed with a qualitative measure for grade-level placement. If a qualitative analysis is not available, evaluators should use a tool that focuses on qualitative aspects of text complexity (see http://achievethecore.org/qualitative-text-analysis).</p>	<p>Rating:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Move (to grade ____)</p>

Assessment Text Quality Criteria Checklist Section 1

Criteria

1.3 Text quality is fundamental to text selection:

Does the text represent professional-quality literary or informational writing?

Details

The text should demonstrate coherence, thorough development of ideas, clear use of evidence and details, and effective structure. A history/social studies or science/technical text, especially, should reflect the factual accuracy and quality of writing that is produced by authorities in the particular academic discipline. To meet quality requirements, the text will most likely be previously published. If the text was “commissioned,” evaluate it closely for richness of content and clarity of organization, as many commissioned texts are thin and diffuse.

Evidence

Rating:

- Yes
 No

NOTE: (“Move” is not an option; poor quality texts should never be used)

1.4 All texts must align to the particulars of the grade-level Standards:

Do the characteristics of the text (e.g., story, literary nonfiction, historical account, scientific procedure) accurately represent the specific requirements of the Standards at the designated grade?

This requirement also applies to pairs or multiple texts; the Standards often have specific requirements for pairing texts.

Rating:

- Yes
 No
 Move (to grade ____)

Assessment Text Quality Criteria Checklist Section 1

Criteria

1.5 Audio or video texts must meet the quality criteria that other texts do:

If a text is an audio or video stimulus, does it provide rich content and represent high-quality sound and/or viewing production?

Details

These texts must be content rich and have appropriate clarity and accents so that they can be clearly understood.

Evidence

Rating:

- Yes
- No
- N/A (not audio or visual)

NOTE: (“Move” is not an option; poor quality texts should never be used)

If the text has any “No’s” for any one of the questions above, remove it from consideration.

If the text has all “Yes” or “Moves,” proceed to Section 2.

Assessment Text Quality Criteria Checklist Section 2

Texts that pass the first section must next meet the following criteria, as applicable, possibly after revisions.

Criteria	Details	Evidence
<p>2.1 Excerpts must be selected with care: If the text is an excerpt from a larger work, does it carry a sense of completeness and maintain the intent of the original, and are edits for length made at the beginning or end of the piece, rather than in patchwork fashion?</p>	<p>If “No” is checked, recommend changes in the excerpting or reject the text and recommend replacing it with a more complete excerpt.</p>	<p>Rating:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> N/A</p>
<p>2.2 Introductory material must include only the most necessary information: If the text is presented with introductory material, does the introduction avoid summarizing or explaining the meaning of the text or giving students answers to questions?</p>	<p>If “No” is checked, suggest edits to the introduction.</p>	<p>Rating:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> N/A</p>

Assessment Text Quality Criteria Checklist Section 2

Criteria

2.3 Illustrations must add value:

If a text includes visual elements, are they related to the central ideas of the text, and do they provide important additional information?

Details

If “No” is checked, suggest adding or deleting specific illustrations.

Evidence

Rating:

- Yes
- No
- N/A

2.4 Expository text structures are desirable for informational texts:

If an informational text uses chronological rather than expository structures, is there sufficient justification, in terms of quality and/or subject matter, for its use?

If “No” is checked, suggest replacing the text with one that uses expository structures unless there is sufficient justification for its use.

Rating:

- Yes
- No
- N/A

Assessment Text Quality Criteria Checklist Section 2

Criteria

2.5 Each text must fall within an acceptable range of word count:

Does the text fall within an acceptable range for word count at the indicated grade level?

Details

If “No” is checked, reject the text or suggest edits for length.

Evidence

Rating:

- Yes
 No

2.6 Paired or multiple texts must have a clear and meaningful relationship with each other:

If texts are paired, are the potential points of comparison significant (not superficial), such as theme, amount and quality of evidence, differences in emphasis, distinguishable structures, changes to derivative text?

If “No” is checked, reject one or more of the texts and, if possible, make recommendations for replacements.

Rating:

- Yes
 No
 N/A

Assessment Text Quality Criteria Checklist Section 2

Criteria

2.7 For tasks that simulate research, one text should serve as an “anchor” text:

Does the first text in the set provide foundational knowledge and lead naturally to additional reading and exploration?

Details

If “No” is checked, suggest another text as the anchor or recommend replacing one or more texts.

Evidence

Rating:

- Yes
- No
- N/A

Overall Rating for Checklist #2:

- Accepted (all Yes)
- Accepted conditionally, with comments to be addressed
- Rejected

Assessment Passage & Item Quality Criteria Checklist

ELA/Literacy Quality Checklist for Assessment Questions Worth Asking

The following checklist has been designed to help evaluators of ELA/literacy assessments determine if individual test questions (items) in Reading and/or Writing assessments align to the Common Core State Standards (CCSS).

The checklist has been set up in a gated manner so that evaluators can quickly determine whether an item aligns to, or strays from, the expectations of the CCSS. If an item does not pass the applicable criteria in Section 1, the item should be removed from consideration. If an item does pass the applicable criteria in Section 1, it should be evaluated against the additional criteria in Section 2.

Use the center column to record each determination. Have the Common Core State Standards for ELA/Literacy open for continual reference. At the end of Section 2, the item can be marked as Accepted, Accepted Conditionally, or Rejected.

In this document, the word “item” refers to all formats of test questions.

Assessment Item Quality Criteria Checklist Section 1

For evaluation of individual items and sets of items: Each item must meet all of the following criteria. An item that does not pass the criteria in this section does not need to be evaluated further.

Criteria	Details	Evidence
<p>1.1 Reading test questions must be text-dependent, requiring analysis of text and use of evidence: If it is a Reading test question, does the item require close reading and careful analysis of the text—by asking for either direct or indirect use of textual evidence, as required by Reading Standard 1?</p>	<p>Every Reading item must require students to use evidence from the text either directly, by citing textual evidence, or indirectly, by relying on textual evidence to make a claim or inference.</p>	<p>Rating:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> N/A</p>
<p>1.2 Writing prompts should be text-dependent, requiring analysis of text and use of evidence: If it is a Writing prompt, does the item require students to analyze text and provide textual evidence in their response, as required by Writing Standard 9?</p>	<p>If the prompt calls for narrative writing, this requirement can be marked as N/A; however, narrative prompts that do require textual analysis are more desirable than those that do not.</p>	<p>Rating:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> N/A</p>

Assessment Item Quality Criteria Checklist Section 1

Criteria

1.3 Reading test questions and Writing prompts must be worthy of student attention:

Does the item focus on the central ideas or important particulars of the text, rather than insignificant or peripheral aspects?

Details

Reading items and Writing prompts must allow students to deliver significant insights about the text.

Evidence

Rating:

- Yes
 No

1.4 Reading test questions and Writing prompts must align to grade-level Standards:

Does the item genuinely (not superficially) align to the intent of the grade-level Standard(s) indicated in the item metadata?

Reading items must align to the intent of at least one Reading Standard (in addition to Standard 1), avoiding mere surface treatment of any Standard. Writing prompts must be designed to elicit one of the three types of writing named in Writing Standards 1, 2, and 3 (as well as aligning to Standard 9). A “blended” writing type is also aligned.

Rating:

- Yes
 No

Assessment Item Quality Criteria Checklist Section 1

Criteria

1.5 Items assessing vocabulary must focus on words and phrases that are important to central ideas in the text:

If the test question is a Reading item or Writing prompt assessing vocabulary, does it assess a word or phrase that is important to understanding the central ideas of the text, giving students a “payoff” in gaining greater understanding of the meaning of the text?

Details

Items should avoid focusing on unusual words or turns of phrase that may stand out as interesting but do not advance an understanding of the text, nor should vocabulary items be “stand-alone” (e.g., based on a single phrase or sentence without any reading passage).

Evidence

Rating:

- Yes
- No
- N/A

**If the text has any “No’s” for any one of the applicable questions above, remove it from consideration.
If the text has all “Yes” and appropriate “N/A’s,” proceed to Section 2.**

Assessment Item Quality Criteria Checklist Section 2

Items that pass the first section must next meet the following criteria, as applicable, possibly after revisions.

Criteria	Details	Evidence
<p>2.1 Items must align to the Standards (see 1.5 above) but may require revisions in wording or in the Standards designated for alignment:</p> <p>Is the alignment of the item to Reading and/or Writing Standards as precise as possible?</p>	<p>If “No” is checked, suggest revisions in wording and/or a different alignment, or reject the item.</p>	<p>Rating:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>2.2 The language used in Reading items and Writing prompts should be text-specific, as appropriate:</p> <p>Does the item use language specific to the text, avoiding generic or “canned” items that could be used with any text?</p>	<p>If “No” is checked, reject the item or suggest revisions unless the use of generic language is appropriate to the Standard being tested (e.g., “What is the central idea?”).</p>	<p>Rating:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>2.3 The language used in Reading items and Writing prompts must be clear and concise:</p> <p>Will students readily understand the language in the item because it employs vocabulary and sentence structures appropriate to the grade level?</p>	<p>If “No” is checked, reject the item or suggest revisions.</p>	<p>Rating:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>

Assessment Item Quality Criteria Checklist Section 2

Criteria

Details

Evidence

2.4 Each item must exemplify high Standards of technical quality:

If the item uses a selected-response format, is the item free from internal clueing (e.g., the options do not repeat words in the stem; the grammatical relationship between stem and options is correct for all options; the correct response is not more specific than the options; the correct answer does not simply paraphrase words in the text)?

If “No” is checked, reject the item or suggest revisions*.

Rating:

- Yes
 No
 N/A

If the item uses a selected-response format, are the distractors plausible but incorrect (not unintended or arguable correct answers), are general statements precise and accurate, and can claims and inferences be supported by textual evidence?

If “No” is checked, reject the item or suggest revisions*.

Rating:

- Yes
 No
 N/A

If the item asks students to generate a written response, is there a clear description of the task, accompanied by information for students about the criteria for scoring?

If “No” is checked, reject the item or suggest revisions*.

Rating:

- Yes
 No
 N/A

Assessment Item Quality Criteria Checklist Section 2

Criteria

Details

Evidence

If the item has two parts, is the relationship between the two parts clear and logical, and is there a plausible link between the options in the two parts?

If “No” is checked, reject the item or suggest revisions.

Rating:

- Yes
- No
- N/A

If the item uses computer delivery, does it use technology to approach the text in ways other item types cannot, providing value beyond that of a non-technology enhanced item?

If “No” is checked, reject the item or suggest revisions.

Rating:

- Yes
- No
- N/A

If the item uses computer delivery, are the directions for use of technology clear and easy to follow?

If “No” is checked, reject the item or suggest revisions.

Rating:

- Yes
- No
- N/A

Assessment Item Quality Criteria Checklist Section 2

Criteria

If the item assesses vocabulary, does it assess the kinds of words and phrases delineated in the grade-level Standards?

Details

If “No” is checked, reject the item or suggest revisions.

Evidence

Rating:

- Yes
- No
- N/A

If the item calls for comparison or synthesis, is the question related to central (rather than trivial) aspects of the text (e.g., amount and quality of evidence, differences in emphasis, distinguishable structures, changes to derivative text)?

If “No” is checked, reject the item or suggest revisions.

Rating:

- Yes
- No
- N/A

If the item contains a graphic organizer or similar format, does the organizer or format add value to the item by allowing students to demonstrate understanding of the text in a way that a traditional item would not?

If “No” is checked, reject the item or suggest revisions.

Rating:

- Yes
- No
- N/A

Assessment Item Quality Criteria Checklist Section 2

Criteria

Details

Rating

2.5 Sets of items must provide deep and comprehensive coverage of the text:

As a whole, does the set of items require students to read the full text carefully and show their understanding of the central ideas, allowing and requiring students to provide deep insights rather than skim the surface?

If “No” is checked, reject the set or suggest ideas for additional items.

Rating:

- Yes
 No

As a whole, does the set address as many different Standards as appropriate, with items based on the individual characteristics of the text rather than on a forced standard coverage?

If “No” is checked, reject the set or suggest ideas for addition or deletion of items.

Rating:

- Yes
 No

As a whole, is the set of items large and robust enough so that a test form is likely to have an appropriate balance between the number of texts and numbers of questions, giving students sufficient incentive to read closely and carefully?

If “No” is checked, reject the set or suggest ideas for additional items.

Rating:

- Yes
 No

Assessment Item Quality Criteria Checklist Section 2

Criteria

As a whole, is the set of items free from clueing (so that one item does not provide the correct answer for another)?

Details

If “No” is checked, reject the set or suggest ideas for revisions.

Rating

Rating:

- Yes
 No

Overall Rating for Checklist #2:

- Accepted (all yes) Accepted conditionally, with comments to be addressed Rejected

* Consider asking for a rationale for every answer option (MC and TE items) and a sample response for every score point (CR items). Providing rationales and sample responses is best practice in assessment development and tends to generate better quality items.

Assessment Item Quality Criteria Checklists

Mathematics, Grades 3–12

Assessment Item Quality Criteria Checklist

Process for Evaluating Items for Common Core State Standards-Aligned Assessments

Step 1: Solve the item.

Step 2: Evaluate the item according to the criteria on the following page. The criteria are set-up in a gated manner so that evaluators can quickly and systematically determine whether an item aligns to, or strays from, the expectations of the CCSSM. Evaluators use the right column to record “Yes/No/Revised” or “Revised” as appropriate.

- “Yes”: the item meets the expectations of the criterion;
- “No”: the item does not meet the expectation of the criterion;
- “Revised”: the item, as it currently exists, does not meet the criterion, but could be revised to do so; and
- in the second section, check “N/A” if the criterion is not applicable to the item.

Use the center column to explain your determination using evidence.

Have the Common Core State Standards for Mathematics open for continual reference.

Criteria for Evaluating Items for Common Core State Standards-Aligned Assessments

Evaluator has solved the item

Section 1: The item must meet all of the following to be considered further.

Item / Task	Evidence	Rating
<p>1A Alignment: Is the item directly and accurately aligned to the assessment target and Standard(s) indicated, including the Standards for Mathematical Practice(s) listed?</p>		<p><input type="checkbox"/> Yes <input type="checkbox"/> Revised</p> <p><input type="checkbox"/> No</p>
<p>1B Correctness: Is the item mathematically correct, including at least one appropriate solution and accurate use of mathematical vocabulary and symbols?</p>		<p><input type="checkbox"/> Yes <input type="checkbox"/> Revised</p> <p><input type="checkbox"/> No</p>
<p>1C Rationales and/or Top-Score Response: For a selected-response item (SR), are high-quality rationales (aligned to the assessment targets and Standard(s)) provided for the correct answer and each distractor? For a constructed-response item (CR), is a top-score response provided?</p>		<p><input type="checkbox"/> Yes <input type="checkbox"/> Revised</p> <p><input type="checkbox"/> No</p>
<p>1D Grade Appropriateness: Does the item reflect the coherence of the Standards by using appropriate mathematical vocabulary, numbers, and symbols for the grade or course?</p>		<p><input type="checkbox"/> Yes <input type="checkbox"/> Revised</p> <p><input type="checkbox"/> No</p>

If the item does not meet all of the criteria above and cannot be revised to do so, remove the item from consideration. Otherwise, proceed to the second section.

Criteria for Evaluating Items for Common Core State Standards-Aligned Assessments

Section 2: Items that pass the first gate must next meet the following criteria, possibly after revision.

Item / Task	Evidence	Rating	
2A Linguistic Clarity: Is the written text of an item clear, unambiguous, and appropriate for the grade level with no construct-irrelevant linguistic complexity (e.g., negative phrasings, complex sentence structures)?		<input type="checkbox"/> Yes	<input type="checkbox"/> Revised
		<input type="checkbox"/> No	<input type="checkbox"/> N/A
2B Technical Quality: Does the item clearly communicate the expectation, preclude guessing, and refrain from clueing a student’s response strategy?		<input type="checkbox"/> Yes	<input type="checkbox"/> Revised
		<input type="checkbox"/> No	<input type="checkbox"/> N/A
2C Accessibility: Is the item accessible, reflecting Universal Design for Learning (UDL) principles to maximize accessibility for ELL students and students with disabilities?		<input type="checkbox"/> Yes	<input type="checkbox"/> Revised
		<input type="checkbox"/> No	<input type="checkbox"/> N/A
2D Technology: If technology is used, is it clear, is it easily used by the students, does it improve measurement of the construct, and does it represent real-life use of technology, where applicable?		<input type="checkbox"/> Yes	<input type="checkbox"/> Revised
		<input type="checkbox"/> No	<input type="checkbox"/> N/A

Criteria for Evaluating Items for Common Core State Standards-Aligned Assessments

Item / Task	Evidence	Rating
2E Complexity: Does the item align to the intended complexity required by the assessment claim and Standard(s) being assessed, without any needless complexity or difficulty?		<input type="checkbox"/> Yes <input type="checkbox"/> Revised <input type="checkbox"/> No <input type="checkbox"/> N/A
2F Context Quality: When a situational or real-world context is present for the item, is the context logical, grade appropriate, and necessary to assess the Standard?		<input type="checkbox"/> Yes <input type="checkbox"/> Revised <input type="checkbox"/> No <input type="checkbox"/> N/A
2G Stimuli: Are diagrams, pictures, or illustrations, clear, purposeful, and consistent with UDL principles?		<input type="checkbox"/> Yes <input type="checkbox"/> Revised <input type="checkbox"/> No <input type="checkbox"/> N/A
2H Rubric: For open-ended items, are rubrics clear, aligned to the assessment target, and valid for all solution paths?		<input type="checkbox"/> Yes <input type="checkbox"/> Revised <input type="checkbox"/> No <input type="checkbox"/> N/A

Section 6

Additional Resources for Evaluating Alignment of Instructional Materials

Achieve Open Educational Resource Rubrics

Qualitative Measures Rubric for Informational Text and Qualitative Measures for Literature

CCSS Grade Bands and Quantitative Measure

Illustrative Mathematics Task Review Tool

Additional Resources for Evaluating Alignment of Instructional Materials

Achieve Open Educational Resource (OER) Rubrics

Open Educational Resources (OER) are instructional materials, often in a digital and online format, that contain an open copyright license that allows educators to share, reuse and edit these materials. The OER Rubrics can be used in developing or evaluating OER to help determine the degree of alignment of OER to the CCSS, and to determine aspects of quality of OER. OER range from a single lesson or instructional support material (such as a problem set or game) to a complete unit or set of support materials.

To view and download, please visit:
<http://www.achievethecore.org/oer-rubrics>

Qualitative Measures Rubric for Informational Text and Qualitative Measures Rubric for Literature

Developed by the Council of Chief State School Officer's English Language Arts state collaborative to support qualitative analysis of what makes a given text complex, these qualitative rubrics guide educators in measuring features of text complexity, such as: text, structure, language clarity and conventions, knowledge demands, and levels of meaning and purpose.

To view and download, please visit:
<http://achievethecore.org/qualitative-measures> or
www.ccsso.org/textcomplexity

CCSS Grade Bands and Quantitative Measures

A step-by-step guide to accessing free, online tools that identify the appropriate grade band for a text.

To view and download, please visit:
www.achievethecore.org/quantitative-measures

Illustrative Mathematics Task Review Tool

The Illustrative Mathematics task review criteria are used to evaluate K–12 mathematics tasks designed specifically to illustrate the CCSSM and intended for inclusion on the Illustrative mathematics website (<http://www.illustrativemathematics.org/>). Each task is intended to be part of a highly crafted set that illustrates the breadth, depth and nuances of each standard, cluster, domain, grade level, or conceptual category in the standards. In order to be published at Illustrative Mathematics, a task must meet all eight criteria described in the review form.

To view and download, please visit:
<http://bit.ly/1q8vvEr>

Section 7

Appendix: The Publishers' Criteria for the Common Core State Standards

- 330** ELA/Literacy, Grades K–2
- 340** ELA/Literacy, Grades 3–12
- 360** Mathematics, Grades K–8
- 383** Mathematics, High School

Appendix: The Publishers' Criteria for the Common Core State Standards

ELA/Literacy, Grades K–2



Revised Publishers' Criteria for the Common Core State Standards in English Language Arts and Literacy, Grades K–2

David Coleman • Susan Pimentel

INTRODUCTION

Developed by two of the lead authors of the Common Core State Standards and revised through conversations with teachers, researchers and other stakeholders, these criteria are designed to guide publishers and curriculum developers as they work to strengthen existing programs and ensure alignment of materials with the Standards to provide a clear and consistent framework. The standards are the product of a state-led effort coordinated by the National Governors' Association Center for Best Practices and the Council of Chief State School Officers and were developed in collaboration with states, teachers, school administrators, and content experts.

The criteria articulated below concentrate on the most significant elements of the Common Core State Standards for literacy in kindergarten through second grade and lay out their implications for aligning materials with the standards. They are intended to guide teachers, curriculum developers and publishers to be purposeful and strategic in both what to include and what to exclude in instructional materials. By underscoring what matters most in the standards, the criteria illustrate what shifts must take place in the next generation of curricula, including paring away elements that distract or are at odds with the Common Core State Standards, and refining components to be consistent with research-based practices. These guidelines are not meant to dictate classroom practice but rather to help ensure that teachers receive and rely on effective tools. At the heart of these criteria is the belief that reading — in this case, learning to read, vocabulary development and the knowledge gained in these early years — is central to all other academic learning.

In the early grades, this includes thorough attention to the foundations of reading. While the goal for readers of all ages is to be able to understand and learn from what they read and to express such knowledge clearly through speaking and writing about text, primary grade instruction in the foundations of reading is essential to ensure that reading problems are prevented and that most students will read well enough to benefit from grade level instruction. While these criteria begin with the foundational skills, they are not an end in and of themselves; rather, they are necessary and important components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines.

In kindergarten through the second grade, the most notable shifts in the standards when compared to state standards include explicit preparation to read informational text and a requirement that students' reading material be substantive and linked in meaningful ways to content area learning. They also include a more in-depth approach to vocabulary development

and a requirement that students encounter sufficiently complex text through listening even while they are learning how to read and write. The standards provide a coherent approach to reading comprehension in the early years built on anchor standards that extend into third through twelfth grade learning. Finally, the standards cultivate a wide range of writing including narrative expression of experiences real and imagined as well as sharing information and opinions.

DOCUMENT ORGANIZATION

This document has three parts: The first articulates criteria that should guide the teaching of reading foundations, the second details the criteria that should guide the selection of texts for read-alouds and for students who already can read, and the third outlines criteria for the development of high-quality, fully integrated materials that provide linear, cumulative skill progressions and practice with text-dependent questions and tasks, leading to fluent, independent reading for meaning.

- I. **Key Criteria for Reading Foundations**
- II. **Key Criteria for Text Selections**
- III. **Key Criteria for Questions and Tasks**

ELA and Literacy Curricula, Grades K-2

1. Key Criteria for Reading Foundations

The Common Core State Standards offer specific guidance on reading foundations that should be incorporated into curriculum materials so that students will be well on their way to decoding automatically and reading with fluency by the time they finish second grade. While progress in fluency with more complex text should continue through third grade and beyond, and gains in understanding of language structure should continue through the elementary grades, the first three years of instruction (K-2) are the most critical for preventing students from falling behind and preventing reading failure. The standards articulate a well-developed set of skills and habits that taken collectively lay the foundation for students to achieve competence in reading comprehension. (See pp. 14–16 of the Common Core State Standards for more detail.)

Materials aligned with the Common Core State Standards need to provide sequential, cumulative instruction and practice opportunities for the full range of foundational skills. The elements should be gradually interwoven—from simple to complex—so that students come to understand and use the system of correspondences that characterize written English. The code systems on which reading and writing depend include letters, the speech sounds of spoken language (phonemes), the correspondences between phonemes and graphemes (phonics) and the representation of meaningful word parts (morphemes). Automatic and accurate word recognition is the expected outcome of this instruction. By learning to decipher word forms students will be able to access word meanings in print, and make the shift to independent, close reading of complex text.

1. **Materials allow for flexibility in meeting the needs of a wide range of students.** Students come to school unevenly prepared to read. While the primary purpose of a beginning reading instruction program is to ensure that all students learn how to read, some students will move ahead quickly and should be able to move on once they have demonstrated mastery of the basic content. Additionally, adjustments should be made to programs now in use to refine content and methodology that will likely “catch” more of those students who otherwise would fall behind and require remedial work.
2. **Materials include effective instruction for all aspects of foundational reading (including distributed practice).**¹ Materials that are aligned to the standards should provide explicit and systematic instruction and diagnostic support in concepts of print, phonological awareness, phonics, vocabulary development, syntax, and fluency. These foundational skills are necessary and central components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines.

Materials should provide ample opportunities for students to understand and fully learn the spelling/sound patterns necessary — though not sufficient — to become successful readers. This goal is accomplished when students can transfer knowledge of these

¹ Details about what explicitly should be taught is outlined in the Foundational Reading Standards and further explicated in Appendix A of the standards, including but not limited to the explicit teaching of the speech sounds of English orthography, instruction in the nature of the speech sound system (what is a vowel, what is a consonant; how is a consonant different from a vowel), and instruction in letter formation as well as letter naming and alphabetic order.

patterns to words not previously seen or studied. Because students differ widely in how much exposure and practice they need to master foundational skills, materials also need to incorporate high-quality activities for those students who are able to reach facility with less practice. Those students who need less practice can enjoy activities such as extension assignments and especially more independent reading.

- 3. Fluency is a particular focus of instructional materials.** Fluency in the early grades is a function of automaticity in basic skills in speech sound, letter, word, and phrase recognition, as well as knowledge of the meanings of the words that are being read. Materials should include routines and guidance that will remind teachers to monitor the consolidation of skills as students are learning them. Consolidation is usually accomplished through systematic and cumulative instruction, sufficient practice to achieve accuracy, and a variety of specific fluency-building techniques supported by research. These include monitored partner reading, choral reading, repeated readings with text, short timed practice that is slightly challenging to the reader, and involving the student in monitoring progress toward a specific fluency goal.

Teacher support for fluency instruction should explicitly recognize that reading rates vary with the type of text being read and the purpose for reading. For example, comprehension of texts that are of greater informational density or complexity generally requires slower reading. Therefore, if fluency is being monitored to identify those students who need more work in this area, passages that have been standardized through research should be used to assess students' fluency.

- 4. Materials focus on academic vocabulary prevalent in complex texts throughout reading, writing, listening, and speaking instruction.** When they enter school, students differ markedly in their vocabulary knowledge. The entire curriculum should address this vocabulary gap early and systematically or it will expand and accelerate. All materials should provide opportunities for wider ranging and more intensive vocabulary instruction for students with weaker vocabularies than their peers.

Instruction in science, social studies, and the arts will be a major vehicle for enhancing students' vocabulary because most new word learning takes place in the context of having to understand and express ideas about subject matter. Students should receive frequent instruction in word meanings and practice with a variety of vocabulary-building activities. For example, they should learn to examine the context of how the words are being used in the text, consider multiple meanings of common words, examine shades of meaning of words that overlap semantically, and choose words carefully to express ideas. As they learn to read meaningful word parts, such as verb markers and comparative endings, the relationship between word form and word meaning should also be addressed. For English language learners, explicitly highlighting and linking cognates of key words with other languages can be very useful. Materials should use games, jokes, puns, and other forms of word play to enhance instruction and develop a sense of excitement about words.

Some students, including some English language learners, will also need support in mastering the meaning of high-frequency words that are essential to reading grade-level text. Supplemental resources will be necessary for supporting students who are developing knowledge of these words. Since teachers will often not have the time to teach explicitly all of the high-frequency words required, materials should make it possible

for students to learn the words' meanings on their own, providing such things as student-friendly definitions for high-frequency words whose meanings cannot be inferred from the context.

5. ***Materials offer assessment opportunities that measure progress in the foundations of reading.*** Activities used for assessment should clearly denote what standards are being emphasized, and materials should offer frequent and easily implemented assessments, including systems for record keeping and follow-up. These should include a framework and tools for standardized by research in relation to established predictive benchmarks when fluency is being measured. Vocabulary development as well should be assessed using the most reliable and valid methods currently available.

II. Key Criteria for Text Selections

The CCSS strongly point to the necessity for teaching students how to read with texts that are written to facilitate accurate, independent, confident reading, and the consolidation of basic reading skills in 2nd and 3rd grade. Students who can read are much more likely to read.

The Common Core State Standards point strongly toward the integration of text reading skills with language comprehension instruction, even for those students who lag behind in achieving reading facility. That said, students should be guided into thoughtful reading of even the simplest texts used with beginning readers. To that end, all texts should contain some meaningful information or narrative content with which to develop students' comprehension. The criteria recommended below emphasize the need to provide *all* students with consistent opportunities to confront and comprehend grade-level text.

In addition to students learning to read texts at the K-2 level of complexity, the standards encourage students to encounter more complex texts to build knowledge through read-alouds. Students' early knowledge in areas like history and science should not be limited to what they can read on their own. Because students at these grades can listen to much more complex material than they can read themselves, read-aloud selections should be provided to the teachers in curriculum materials. These should be at levels of complexity well above what students can read on their own.

1. ***Texts for each grade align with the requirements outlined in the standards.*** The Common Core State Standards hinge on students encountering appropriate texts at each grade level to develop the mature language skills and the conceptual knowledge they need for success in school and life. Beginning in grade 2, Reading Standard 10 outlines the band level of text complexity at which students need to demonstrate comprehension. (Appendix A in the Common Core State Standards gives further information on how text complexity can be measured and offers guidance to teachers and curriculum developers on selecting the texts their students read.)²
2. ***All students (including those who are behind) have extensive opportunities to encounter grade-level text.*** Far too often, students who have fallen behind are given only less

² A working group has developed clear, common standards for measuring text complexity that are consistent across different curricula and publishers. These measures blend quantitative and qualitative factors and are being widely shared and made available to publishers and curriculum developers. The measures are based on the principles laid out in Appendix A and have been further developed and refined. These criteria recognize the critical role that teachers play in text selection.

complex texts rather than the instruction they need in the foundational skills in reading as well as vocabulary and other supports they need to read at an appropriate level of complexity. Complex text, whether accessed through individual reading or as a group reading activity, is a rich repository of information which all readers learn how to access. Complex text contains more sophisticated academic vocabulary, lends itself to more complex tasks, and is able to support rich dialogue.

Instruction for slower readers is most effective when it addresses all of the critical reading components in an integrated and coordinated manner. Students who need additional assistance, however, must not miss out on essential instruction their classmates are receiving to help them think deeply about texts, participate in thoughtful discussions, and gain knowledge of both words and the world.

3. ***Text selections are worth reading and re-reading.*** The standards maintain that high-quality text selections should be consistently offered to students because they will encourage students and teachers to dig more deeply into their meanings than they would with lower quality material. Texts selected for inclusion should be well written and, as appropriate, richly illustrated. This principle applies equally to texts intended for reading aloud and texts for students to read by themselves. (For samples of appropriate quality of selection, see Appendix B of the Common Core State Standards.)

4. ***Literacy programs shift the balance of texts and instructional time to include equal measures of literary and informational text.*** The standards call for elementary curriculum materials to be recalibrated to reflect a mix of 50 percent literary and 50 percent informational text, including reading in ELA, science, social studies, and the arts. Achieving the appropriate balance between literary and informational text in the next generation of materials requires a significant shift in early literacy materials and instructional time so that scientific and historical text are given the same time and weight as literary text. (See p. 31 of the standards for details on how literature and informational texts are defined.)

In the last few years, informational texts that are rich and accessible to even first and second grades are available although many more such texts are needed. Because students at these grades can listen to much more complex material than they can read themselves, read-aloud selections should be provided for the teachers in the curriculum materials. These should be at levels of complexity well above what students can read on their own. Science and social studies in particular should be taught in such a way that students have access to the concepts and vocabulary through read-alouds beyond what they can read on their own.

To develop reading comprehension and vocabulary for *all* readers, the selected informational texts need to build a coherent body of knowledge within and across grades. (The sample series of texts regarding “The Human Body” provided on p. 33 of the Common Core State Standards offers an example of selecting texts to build knowledge coherently within and across grades. It includes both grade level texts and read aloud texts that illustrate the quality and complexity of student reading in the standards.)

5. ***Additional materials aim to increase the regular independent reading of texts that appeal to students’ interests while developing both their knowledge base and joy in reading.*** These materials should ensure that all students have daily opportunities to read

texts of their choice on their own during and outside of the school day. Students need access to a wide range of materials on a variety of topics and genres both in their classrooms and in their school libraries to ensure that they have opportunities to independently read broadly and widely to build their knowledge, experience, and joy in reading. Materials will need to include texts at students' own reading level as well as texts with complexity levels that will challenge and motivate students. Texts should also vary in length and density, requiring students to slow down or read more quickly depending on their purpose for reading. In alignment with the standards and to acknowledge the range of students' interests, these materials should include informational texts as well as literature.

III. Key Criteria for Questions and Tasks

Materials offered in support of reading comprehension should assist teachers and students in staying focused on the primary goal of instruction in these early years: developing proficient and fluent readers able to learn independently from a wide variety of rich texts. The aim is for students to understand that thinking and reading occur simultaneously. Curricula should focus classroom time on practicing reading, writing, speaking, and listening with high-quality text and text-dependent questions and omit that which would otherwise distract from achieving those goals.

1. ***Questions and tasks cultivate students' abilities to ask and answer questions based on the text.*** Materials that accompany texts should ask students to think about what they have read or heard and then ask them to draw evidence from the text in support of their ideas about the reading. The standards strongly focus on students gathering evidence and knowledge from what they read and therefore require that a majority of questions and tasks that children ask and respond to be based on the text under consideration. (This is equally true for read-alouds students listen to as for material students read for themselves.)

Student background knowledge and experiences can illuminate the reading but should not replace attention to the text itself. Questions and tasks should require thinking about the text carefully and finding evidence in the text itself to support the response. Discussion tasks, activities, questions, and writings following readings should draw on a full range of insights and knowledge contained in the text in terms of both content and language.

Instructional support materials should focus on posing questions and writing tasks that help students become interested in the text and cultivate student mastery of the specific details and ideas of the text.

High quality text dependent questions are more often text specific rather than generic.

That is, high quality questions should be developed to address the specific text being read, in response to the demands of that text. Good questions engage students to attend to the particular dimensions, ideas, and specifics that illuminate each text. Though there is a productive role for good general questions for teachers and students to have at hand, materials should not over rely on "cookie-cutter" questions that could be asked of any text, such as "What is the main idea? Provide three supporting details." Materials should develop sequences of individually crafted questions that draw students and teachers into an exploration of the text or texts at hand.

2. *Materials provide opportunities for students to build knowledge through close reading of specific texts (including read-alouds).* Materials should design opportunities for careful reading of selected passages or texts and create a series of questions that demonstrate how close attention to those readings allows students to gather evidence and build knowledge. This approach can and should encourage the comparison and synthesis of multiple sources. Once each source is read or listened to and understood carefully, attention should be given to integrating what students have just read with what they have read and learned previously. How does what they have just read compare to what they have learned before? Drawing upon relevant prior knowledge, how does the text expand or challenge that knowledge?

3. *Scaffolds enable all students to experience rather than avoid the complexity of the text.* Many students will need careful instruction — including effective scaffolding — to enable them to read at the level required by the Common Core State Standards. However, the scaffolding should not preempt or replace the text by translating its contents for students or telling students what they are going to learn in advance of reading or listening to the text; the scaffolding should not become an alternate, simpler source of information that diminishes the need for students to read or listen to the text itself carefully.

Students' initial exposure to a text should often engage them directly with the text so they can practice independent reading. Students should be asked to glean the information they need from multiple readings of a text, each with a specific purpose. In particular, aligned curriculum should explicitly direct students to re-read challenging portions of the text and teachers to return to these portions in read-alouds. Follow-up support should guide readers in the use of appropriate strategies and habits when encountering places in the text where they might struggle, including scaffolding the application of decoding strategies, and pointing students back to the text with teacher support when they are confused or run into vocabulary or other problems.

When necessary, extra textual scaffolding prior to and during the first read should focus on words and concepts that are essential to a basic understanding and that students are not likely to know or be able to determine from context. Supports should be designed to serve a wide range of readers, including those English language learners and other students who are especially challenged by the complex text before them. Texts and the discussion questions should be selected and ordered so that they bootstrap onto each other and promote deep thinking and substantive engagement with the text. Care should also be taken that introducing broad themes and questions in advance of reading does not prompt overly general conversations rather than focusing reading on the specifics, drawing evidence from the text, and gleaning meaning from it. In short, activities related to the text should be such that the text itself is the focus of the instruction and children are able to appreciate and get a sense of the selection as a whole.

4. *Reading strategies support comprehension of specific texts and the focus on building knowledge.* Close reading and gathering knowledge from specific texts should be at the heart of classroom activities and not be consigned to the margins when completing assignments. Reading strategies should work *in the service of* reading comprehension (rather than an end unto themselves) and assist students in building knowledge from

texts. To be effective, strategies should be introduced and exercised when they help clarify a specific part of a text and are dictated by specific features of a text and especially to assist with understanding more challenging sections. Over time, and through supportive discussion, interaction, and reflection, students need to build an infrastructure of skills, habits, knowledge, dispositions, and experience that enables them to approach new challenging texts with confidence and stamina.

5. *Reading passages are by design centrally located within materials.* The reading passages in either the teachers' guides or the students' editions of curriculum materials should be easily found and put at the center of the layout so that teachers can select the appropriate texts. The text should be the clear focus of student and teacher attention. Surrounding materials should be thoughtfully considered and justified as essential before being included. The text should be central, and surrounding materials should be included only when necessary, so as not to distract from the text itself.

6. *Materials offer assessment opportunities that genuinely measure progress.* Aligned materials should guide teachers to provide scaffolding to students but also gradually remove those supports by including tasks that require students to demonstrate their independent capacity to read and write in every domain at the appropriate level of complexity and sophistication. Activities used for assessment should clearly denote what standards are being emphasized, and materials should offer frequent and easily implemented assessments, including systems for record keeping and follow-up.

7. *Writing opportunities for students are prominent and varied.* The standards call for writing both as a means of communicating thinking and answering questions and as a means of self-expression and exploration. Writing assignments should be varied and ask students to draw on their experience, on their imagination, and most frequently on the texts they encounter through reading or read-alouds. As a means to such expressions, the standards require students in the early grades to know their letters, phonetic conventions, sentence structures, spelling and the like. Acquiring these basic skills and tools along with regular opportunities to express themselves will enable students to engage in a full range of writing, including writing narratives (both real and imagined), writing to inform, and writing opinions.

CONCLUSION: TRANSPARENT RESEARCH AND PRACTICE BASE

Curriculum materials must also have a clear and documented research base. Curriculum offered an excellent match for the Common Core State Standards should produce evidence of its usability and efficacy with a full range of students, including English language learners. In all materials, principles of reading acquisition are explained, instructions to teachers and students are clear and concise, and the relationship between tasks and the expected learning outcome is clear. Programs that already have a research base should build on that base by continuing to monitor their efficacy with the whole range of Common Core State Standards.

Appendix: The Publishers' Criteria for the Common Core State Standards

ELA/Literacy, Grades 3–12



Revised Publishers' Criteria for the Common Core State Standards in English Language Arts and Literacy, Grades 3–12

David Coleman • Susan Pimentel

INTRODUCTION

Developed by two of the lead authors of the Common Core State Standards and revised through conversations with teachers, researchers, and other stakeholders, these criteria are designed to guide publishers and curriculum developers as they work to ensure alignment with the standards in English language arts (ELA) and literacy for history/social studies, science, and technical subjects. The standards are the product of a state-led effort — coordinated by the National Governors Association Center for Best Practices and the Council of Chief State School Officers — and were developed in collaboration with teachers, school administrators, and experts to provide a clear and consistent framework to prepare students for college and the workforce.

The criteria articulated below concentrate on the most significant elements of the Common Core State Standards and lay out their implications for aligning materials with the standards. These guidelines are not meant to dictate classroom practice but rather to help ensure that teachers receive effective tools. They are intended to guide teachers, curriculum developers, and publishers to be purposeful and strategic in both what to include and what to exclude in instructional materials. By underscoring what matters most in the standards, the criteria illustrate what shifts must take place in the next generation of curricula, including paring away elements that distract or are at odds with the Common Core State Standards.

At the heart of these criteria are instructions for shifting the focus of literacy instruction to center on careful examination of the text itself. In aligned materials, work in reading and writing (as well as speaking and listening) must center on the text under consideration. The standards focus on students reading closely to draw evidence and knowledge from the text and require students to read texts of adequate range and complexity. The criteria outlined below therefore revolve around the texts that students read and the kinds of questions students should address as they write and speak about them.

The standards and these criteria sharpen the focus on the close connection between comprehension of text and acquisition of knowledge. While the link between comprehension and knowledge in reading science and history texts is clear, the same principle applies to all reading. The criteria make plain that developing students' prowess at drawing knowledge from the text itself is the point of reading: reading well means gaining the maximum insight or knowledge possible from each source. Student knowledge drawn from the text is demonstrated when the student uses evidence from the text to support a claim about the text. Hence evidence and knowledge link directly to the text.

DOCUMENT ORGANIZATION

This document has two parts: The first articulates criteria for ELA materials in grades 3–12 and the second for history/social studies, science, and technical materials in grades 6–12. Each part contains sections discussing the following key criteria:

- I. **Key Criteria for Text Selection**
- II. **Key Criteria for Questions and Tasks**
- III. **Key Criteria for Academic Vocabulary**
- IV. **Key Criteria for Writing to Sources and Research**

The criteria for ELA materials in grades 3–12 have one additional section:

- V. **Additional Key Criteria for Student Reading, Writing, Listening, and Speaking**

ELA and Literacy Curricula, Grades 3-5; ELA Curricula, Grades 6–12

I. Key Criteria for Text Selection

1. **Text Complexity:** The Common Core State Standards require students to read increasingly complex texts with growing independence as they progress toward career and college readiness.

A. *Texts for each grade align with the complexity requirements outlined in the standards.* Reading Standard 10 outlines the level of text complexity at which students need to demonstrate comprehension in each grade. (Appendix A in the Common Core State Standards gives further information on how text complexity can be measured and offers guidance to teachers and curriculum developers on selecting the texts their students read.)¹ Research makes clear that the complexity levels of the texts students are presently required to read are significantly below what is required to achieve college and career readiness. The Common Core State Standards hinge on students encountering appropriately complex texts at each grade level to develop the mature language skills and the conceptual knowledge they need for success in school and life. Instructional materials should also offer advanced texts to provide students at every grade with the opportunity to read texts beyond their current grade level to prepare them for the challenges of more complex text.

B. *All students (including those who are behind) have extensive opportunities to encounter grade-level complex text.* Far too often, students who have fallen behind are only given less complex texts rather than the support they need to read texts at the appropriate level of complexity. Complex text is a rich repository of ideas, information, and experience which all readers should learn how to access, although some students will need more scaffolding to do so. Curriculum developers and teachers have the flexibility to build progressions of texts of increasing complexity within grade-level bands that overlap to a limited degree with earlier bands (e.g., grades 4–5 and grades 6–8).

Curriculum materials should provide extensive opportunities for all students in a classroom to engage with complex text, although students whose reading ability is developing at a slower rate also will need supplementary opportunities to read text they can comprehend successfully without extensive supports. These students may also need extra assistance with fluency practice and vocabulary building. Students who need additional assistance, however, must not miss out on essential practice and instruction their classmates are receiving to help them read closely, think deeply about texts, participate in thoughtful discussion, and gain knowledge of both words and the world.

Some percentage of students will enter grade 3 or later grades without a command of foundational reading skills such as decoding. It is essential for these students to have

¹ A working group has developed clear, common standards for measuring text complexity that are consistent across different curricula and publishers. These measures blend quantitative and qualitative factors and are being widely shared and made available to publishers and curriculum developers. The measures are based on the principles laid out in Appendix A and have been further developed and refined. These criteria recognize the critical role that teachers play in text selection.

age-appropriate materials to ensure that they receive the extensive training and practice in the foundational reading skills required to achieve fluency and comprehension. The K–2 publishers’ criteria more fully articulate the essential foundational skills all students need to decode to become fluent readers and comprehend text.

C. *Shorter, challenging texts that elicit close reading and re-reading are provided regularly at each grade.* The study of short texts is particularly useful to enable students at a wide range of reading levels to participate in the close analysis of more demanding text. The Common Core State Standards place a high priority on the close, sustained reading of complex text, beginning with Reading Standard 1. Such reading focuses on what lies within the four corners of the text. It often requires compact, short, self-contained texts that students can read and re-read deliberately and slowly to probe and ponder the meanings of individual words, the order in which sentences unfold, and the development of ideas over the course of the text. Reading in this manner allows students to fully understand informational texts as well as analyze works of literature effectively.

D. *Novels, plays, and other extended full-length readings are also provided with opportunities for close reading.* Students should also be required to read texts of a range of lengths — for a variety of purposes — including several longer texts each year. Discussion of extended or longer texts should span the entire text while also creating a series of questions that demonstrate how careful attention to specific passages within the text provide opportunities for close reading. Focusing on extended texts will enable students to develop the stamina and persistence they need to read and extract knowledge and insight from larger volumes of material. Not only do students need to be able to read closely, but they also need to be able to read larger volumes of text when necessary for research or other purposes.

E. *Additional materials aim to increase regular independent reading of texts that appeal to students’ interests while developing both their knowledge base and joy in reading.* These materials should ensure that all students have daily opportunities to read texts of their choice on their own during and outside of the school day. Students need access to a wide range of materials on a variety of topics and genres both in their classrooms and in their school libraries to ensure that they have opportunities to independently read broadly and widely to build their knowledge, experience, and joy in reading. Materials will need to include texts at students’ own reading level as well as texts with complexity levels that will challenge and motivate students. Texts should also vary in length and density, requiring students to slow down or read more quickly depending on their purpose for reading. In alignment with the standards and to acknowledge the range of students’ interests, these materials should include informational texts and literary nonfiction as well as literature. A variety of formats can also engage a wider range of students, such as high-quality newspaper and magazine articles as well as information-rich websites.

2. Range and Quality of Texts: The Common Core State Standards require a greater focus on informational text in elementary school and literary nonfiction in ELA classes in grades 6–12.

A. In grades 3–5, literacy programs shift the balance of texts and instructional time to include equal measures of literary and informational texts. The standards call for elementary curriculum materials to be recalibrated to reflect a mix of 50 percent literary and 50 percent informational text, including reading in ELA, science, social studies, and the arts. Achieving the appropriate balance between literary and informational text in the next generation of materials requires a significant shift in early literacy materials and instructional time so that scientific and historical text are given the same time and weight as literary text. (See p. 31 of the standards for details on how literature and informational texts are defined.) In addition, to develop reading comprehension for all readers, as well as build vocabulary, the selected informational texts should build a coherent body of knowledge both within and across grades. (The sample series of texts regarding “The Human Body” provided on p. 33 of the Common Core State Standards offers an example of selecting texts that build knowledge coherently within and across grades.)²

B. In grades 6–12, ELA programs shift the balance of texts and instructional time towards reading substantially more literary nonfiction. The Common Core State Standards require aligned ELA curriculum materials in grades 6–12 to include a blend of literature (fiction, poetry, and drama) and a substantial sampling of literary nonfiction, including essays, speeches, opinion pieces, biographies, journalism, and historical, scientific, or other documents written for a broad audience. (See p. 57 of the standards for more details.) Most ELA programs and materials designed for them will need to increase substantially the amount of literary nonfiction they include. The standards emphasize arguments (such as those in the U.S. foundational documents) and other literary nonfiction that is built on informational text structures rather than literary nonfiction that is structured as stories (such as memoirs or biographies). Of course, literary nonfiction extends well beyond historical documents to include the best of nonfiction written for a broad audience on a wide variety of topics, such as science, contemporary events and ideas, nature, and the arts. (Appendix B of the Common Core State Standards provides several examples of high-quality literary nonfiction.)

C. The quality of the suggested texts is high — they are worth reading closely and exhibit exceptional craft and thought or provide useful information. Given the emphasis of the Common Core State Standards on close reading, many of the texts selected should be worthy of close attention and careful re-reading for understanding. To become career and college ready, students must grapple with a range of works that span many genres, cultures, and eras and model the kinds of thinking and writing students should aspire to in their own work. Also, there should be selections of sources that require students to read and integrate a larger volume of material for research purposes. (See Appendix B of the standards for grade-specific examples of texts.)

² The note on the range and content of student reading in K–5 (p. 10) states: “By reading texts in history/social studies, science, and other disciplines, students build a foundation of knowledge in these fields that will also give them background knowledge to be better readers in all content areas in later grades. Students can only gain this foundation when the curriculum is intentionally and coherently structured to develop rich content knowledge within and across grades.”

D. Specific texts or text types named in the standards are included. At specific points, the Common Core State Standards require certain texts or types of texts. In grades 9–12, foundational documents from American history, selections from American literature and world literature, a play by Shakespeare, and an American drama are all required. In early grades, students are required to study classic myths and stories, including works representing diverse cultures. Aligned materials for grades 3–12 should set out a coherent selection and sequence of texts (of sufficient complexity and quality) to give students a well-developed sense of bodies of literature (like American literature or classic myths and stories) as part of becoming college and career ready.

E. Within a sequence or collection of texts, specific anchor texts are selected for especially careful reading. Often in research and other contexts, several texts will be read to explore a topic. It is essential that such materials include a selected text or set of texts that can act as cornerstone or anchor text(s) that make careful study worthwhile. The anchor text(s) provide essential opportunities for students to spend the time and care required for close reading and to demonstrate in-depth comprehension of a specific source or sources. The additional research sources beyond the anchor texts then enable students to demonstrate they can read widely as well as read a specific source in depth.

II. Key Criteria for Questions and Tasks

1. High-Quality Text-Dependent Questions and Tasks: Among the highest priorities of the Common Core State Standards is that students be able to read closely and gain knowledge from texts.

A. A significant percentage of tasks and questions are text dependent. The standards strongly focus on students gathering evidence, knowledge, and insight from what they read and therefore require that a majority of the questions and tasks that students ask and respond to be based on the text under consideration. Rigorous text-dependent questions require students to demonstrate that they not only can follow the details of what is explicitly stated but also are able to make valid claims that square with all the evidence in the text.

Text-dependent questions do not require information or evidence from outside the text or texts; they establish what follows and what does not follow from the text itself. Eighty to ninety percent of the Reading Standards in each grade require text-dependent analysis; accordingly, aligned curriculum materials should have a similar percentage of text-dependent questions. When examining a complex text in depth, tasks should require careful scrutiny of the text and specific references to evidence from the text itself to support responses.

High quality text dependent questions are more often text specific rather than generic. That is, high quality questions should be developed to address the specific text being read, in response to the demands of that text. Good questions engage students to attend to the particular dimensions, ideas, and specifics that illuminate each text. Though there is a productive role for good general questions for teachers

and students to have at hand, materials should not over rely on "cookie-cutter" questions that could be asked of any text, such as "What is the main idea? Provide three supporting details." Materials should develop sequences of individually crafted questions that draw students and teachers into an exploration of the text or texts at hand.

A text-dependent approach can and should be applied to building knowledge from multiple sources as well as making connections among texts and learned material, according to the principle that each source be read and understood carefully. Gathering text evidence is equally crucial when dealing with larger volumes of text for research or other purposes. Student background knowledge and experiences can illuminate the reading but should not replace attention to the text itself.

- B. High-quality sequences of text-dependent questions elicit sustained attention to the specifics of the text and their impact.** The sequence of questions should cultivate student mastery of the specific ideas and illuminating particulars of the text. High-quality text-dependent questions will often move beyond what is directly stated to require students to make nontrivial inferences based on evidence in the text. Questions aligned with Common Core State Standards should demand attention to the text to answer fully. An effective set of discussion questions might begin with relatively simple questions requiring attention to specific words, details, and arguments and then move on to explore the impact of those specifics on the text as a whole. Good questions will often linger over specific phrases and sentences to ensure careful comprehension and also promote deep thinking and substantive analysis of the text. Effective question sequences will build on each other to ensure that students learn to stay focused on the text so they can learn fully from it. Even when dealing with larger volumes of text, questions should be designed to stimulate student attention to gaining specific knowledge and insight from each source.

- C. Questions and tasks require the use of textual evidence, including supporting valid inferences from the text.** The Common Core State Standards require students to become more adept at drawing evidence from the text and explaining that evidence orally and in writing. Aligned curriculum materials should include explicit models of a range of high-quality evidence-based answers to questions — samples of proficient student responses — about specific texts from each grade. Questions should require students to demonstrate that they follow the details of what is explicitly stated and are able to make nontrivial inferences beyond what is explicitly stated in the text regarding what logically follows from the evidence in the text. Evidence will play a similarly crucial role in student writing, speaking, and listening, as an increasing command of evidence in texts is essential to making progress in reading as well as the other literacy strands.

- D. Instructional design cultivates student interest and engagement in reading rich texts carefully.** A core part of the craft of developing instructional materials is to construct questions and tasks that motivate students to read inquisitively and carefully. Questions should reward careful reading by focusing on illuminating specifics and ideas of the text that "pay off" in a deeper understanding and insight. Often, a good question will help students see something worthwhile that they would not have seen on a more cursory reading. The sequence of questions should not be

random but should build toward more coherent understanding and analysis. Care should be taken that initial questions are not so overly broad and general that they pull students away from an in-depth encounter with the specific text or texts; rather, strong questions will return students to the text to achieve greater insight and understanding. The best questions will motivate students to dig in and explore further — just as texts should be worth reading, so should questions be worth answering.

E. *Materials provide opportunities for students to build knowledge through close reading of specific texts.* Materials should design opportunities for close reading of selected passages or texts and create a series of questions that demonstrate how careful attention to those readings allows students to gather evidence and build knowledge. This approach can and should encourage the comparison and synthesis of multiple sources. Once each source is read and understood carefully, attention should be given to integrating what students have just read with what they have read and learned previously. How does what they have just read compare to what they have learned before? Drawing upon relevant prior knowledge, how does the text expand or challenge that knowledge? As students apply knowledge and concepts gained through reading to build a more coherent understanding of a subject, productive connections and comparisons across texts and ideas should bring students back to careful reading of specific texts. Students can and should make connections between texts, but this activity should not supersede the close examination of each specific text.

F. *Questions and tasks attend to analyzing the arguments and information at the heart of informational text.* As previously stated, the Common Core State Standards emphasize the reading of more informational text in grades K–5 and more literary nonfiction in grades 6–12. This emphasis mirrors the Writing Standards that focus on students’ abilities to marshal an argument and write to inform or explain. The shift in both reading and writing constitutes a significant change from the traditional focus in ELA classrooms on narrative text or the narrative aspects of literary nonfiction (the characters and the story) toward more in-depth engagement with the informational and argumentative aspects of these texts. While the English teacher is not meant to be a content expert in an area covered by particular texts, curriculum materials should guide teachers and students to demonstrate careful understanding of the information developed in the text. For example, in a narrative with a great deal of science, teachers and students should be required to follow and comprehend the scientific information as presented by the text. In a similar fashion, it is just as essential for teachers and students to follow the details of an argument and reasoning in literary nonfiction as it is for them to attend to issues of style.

2. *Cultivating Students’ Ability To Read Complex Texts Independently:* Another key priority of the Common Core State Standards is a requirement that students be able to demonstrate their independent capacity to read at the appropriate level of complexity and depth.

A. *Scaffolds enable all students to experience rather than avoid the complexity of the text.* Many students will need careful instruction — including effective scaffolding — to enable them to read at the level of text complexity required by the Common Core State Standards. However, the scaffolding should not preempt or replace the text by translating its contents for students or telling students what they are going to learn in

advance of reading the text; the scaffolding should not become an alternate, simpler source of information that diminishes the need for students to read the text itself carefully. Effective scaffolding aligned with the standards should result in the reader encountering the text on its own terms, with instructions providing helpful directions that focus students on the text. Follow-up support should guide the reader when encountering places in the text where he or she might struggle. Aligned curriculum materials therefore should explicitly direct students to re-read challenging portions of the text and offer instructors clear guidance about an array of text-based scaffolds. When productive struggle with the text is exhausted, questions rather than explanations can help focus the student's attention on key phrases and statements in the text or on the organization of ideas in the paragraph.

When necessary, extra textual scaffolding prior to and during the first read should focus on words and concepts that are essential to a basic understanding and that students are not likely to know or be able to determine from context. Supports should be designed to serve a wide range of readers, including those English language learners and other students who are especially challenged by the complex text before them. Texts and the discussion questions should be selected and ordered so that they bootstrap onto each other and promote deep thinking and substantive engagement with the text.

- B. Reading strategies support comprehension of specific texts and the focus on building knowledge and insight.** Close reading and gathering knowledge from specific texts should be at the heart of classroom activities and not be consigned to the margins when completing assignments. Reading strategies should work *in the service of* reading comprehension (rather than an end unto themselves) and assist students in building knowledge and insight from specific texts. To be effective, instruction on specific reading techniques should occur when they illuminate specific aspects of a text. Students need to build an infrastructure of skills, habits, knowledge, dispositions, and experience that enables them to approach new challenging texts with confidence and stamina. As much as possible, this training should be embedded in the activity of reading the text rather than being taught as a separate body of material. Additionally, care should be taken that introducing broad themes and questions in advance of reading does not prompt overly general conversations rather than focusing reading on the specific ideas and details, drawing evidence from the text, and gleaning meaning and knowledge from it.

- C. Design for whole-group, small-group, and individual instruction cultivates student responsibility and independence.** It is essential that questions, tasks, and activities be designed to ensure that all students are actively engaged in reading. Materials should provide opportunities for students to participate in real, substantive discussions that require them to respond directly to the ideas of their peers. Teachers can begin by asking the kind and level of questions appropriate to the reading and then students should be prompted to ask high-quality questions about what they are reading to one another for further comprehension and analysis. Writing about text is also an effective way to elicit this active engagement. Students should have opportunities to use writing to clarify, examine, and organize their own thinking, so reading materials

should provide effective ongoing prompts for students to analyze texts in writing. Instructional materials should be designed to devote sufficient time in class to students encountering text without scaffolding, as they often will in college- and career-ready environments. A significant portion of the time spent with each text should provide opportunities for students to work independently on analyzing grade-level text because this independent analysis is required by the standards.

- D. **Questions and tasks require careful comprehension of the text before asking for further evaluation or interpretation.** The Common Core State Standards call for students to demonstrate a careful understanding of what they read before engaging their opinions, appraisals, or interpretations. Aligned materials should therefore require students to demonstrate that they have followed the details and logic of an author’s argument before they are asked to evaluate the thesis or compare the thesis to others. When engaging in critique, materials should require students to return to the text to check the quality and accuracy of their evaluations and interpretations. Often, curricula surrounding texts leap too quickly into broad and wide-open questions of interpretation before cultivating command of the details and specific ideas in the text.

- E. **Materials make the text the focus of instruction by avoiding features that distract from the text.** Teachers’ guides or students’ editions of curriculum materials should highlight the reading selections. Everything included in the surrounding materials should be thoughtfully considered and justified before being included. The text should be central, and surrounding materials should be included only when necessary, so as not to distract from the text itself. Instructional support materials should focus on questions that engage students in becoming interested in the text. Rather than being consigned to the margins when completing assignments, close and careful reading should be at the center of classroom activities. Given the focus of the Common Core State Standards, publishers should be extremely sparing in offering activities that are not text based. Existing curricula will need to be revised substantially to focus classroom time on students and teachers practicing reading, writing, speaking, and listening in direct response to high-quality text.

- F. **Materials offer assessment opportunities that genuinely measure progress.** Aligned materials should guide teachers to provide scaffolding but also gradually remove those supports by including tasks that require students to demonstrate their independent capacity to read and write in every domain at the appropriate level of complexity and sophistication. Activities used for assessment should clearly denote what standards and texts are being emphasized, and materials should offer frequent and easily implemented assessments, including systems for record keeping and follow-up.

III. Key Criteria for Academic Vocabulary

Materials focus on academic vocabulary prevalent in complex texts throughout reading, writing, listening, and speaking instruction. Academic vocabulary (described in more detail as Tier 2 words in Appendix A of the Common Core State Standards) includes those words that readers will find in all types of complex texts from different disciplines.

Sometimes curricula ignore these words and pay attention only to the technical words that are unique to a discipline. Materials aligned with the Common Core State Standards should help students acquire knowledge of general academic vocabulary because these are the words that will help them access a wide range of complex texts.

Aligned materials should guide students to gather as much as they can about the meaning of these words from the context of how they are being used in the text, while offering support for vocabulary when students are not likely to be able to figure out their meanings from the text alone. As the meanings of words vary with the context, the more varied the context provided to teach the meaning of a word is, the more effective the results will be (e.g., a state was admitted to the Union; he admitted his errors; admission was too expensive). In alignment with the standards, materials should also require students to explain the impact of specific word choices on the text. Materials and activities should also provide ample opportunities for students to practice the use of academic vocabulary in their speaking and writing.

Some students, including some English language learners, will also need support in mastering high-frequency words that are not Tier 2 words but are essential to reading grade-level text. Materials should therefore offer the resources necessary for supporting students who are developing knowledge of high-frequency words. Since teachers will often not have the time to teach explicitly all of the high-frequency words required, materials should make it possible for students to learn the words' meanings on their own, providing such things as student-friendly definitions for high-frequency words whose meanings cannot be inferred from the context. It also can be useful for English language learners to highlight explicitly and link cognates of key words with other languages.

IV. Key Criteria for Writing to Sources and Research

1. **Materials portray writing to sources as a key task.** The Common Core State Standards require students not only to show that they can analyze and synthesize sources but also to present careful analysis, well-defended claims, and clear information through their writing. Several of the Writing Standards, including most explicitly Standard 9, require students to draw evidence from a text or texts to support analysis, reflection, or research. Materials aligned with the Common Core State Standards should give students extensive opportunities to write in response to sources throughout grade-level materials. Model rubrics for the writing assignments as well as high-quality student samples should also be provided as guidance to teachers.

2. **Materials focus on forming arguments as well as informative writing.** While narrative writing is given prominence in early grades, as students progress through the grades the Common Core State Standards increasingly ask students to write arguments or informational reports from sources. As a consequence, less classroom time should be spent in later grades on personal writing in response to decontextualized prompts that ask students to detail personal experiences or opinions. The Common Core State Standards require that the balance of writing students are asked to do parallel the balance assessed on the National Assessment of Educational Progress (NAEP):
 - In elementary school, 30 percent of student writing should be to argue, 35 percent should be to explain/inform, and 35 percent should be narrative.

- In middle school, 35 percent of student writing should be to write arguments, 35 percent should be to explain/inform, and 30 percent should be narrative.
- In high school, 40 percent of student writing should be to write arguments, 40 percent should be to explain/inform, and 20 percent should be narrative.

These forms of writing are not strictly independent; for example, arguments and explanations often include narrative elements, and both informing and arguing rely on using information or evidence drawn from texts.

3. ***Materials make it clear that student writing should be responsive to the needs of the audience and the particulars of the text in question.*** As the standards are silent on length and structure, student writing should not be evaluated by whether it follows a particular format or formula (e.g., the five paragraph essay). Instead, the Common Core State Standards have been carefully designed to focus on the elements or characteristics of good writing including drawing sufficient evidence from texts, writing coherently with well-developed ideas, and writing clearly with sufficient command of standard English.

4. ***Students are given extensive practice with short, focused research projects.*** Writing Standard 7 emphasizes that students should conduct several short research projects in addition to more sustained research efforts. Materials should require several of these short research projects annually to enable students to repeat the research process many times and develop the expertise needed to conduct research independently. A progression of shorter research projects also encourages students to develop expertise in one area by confronting and analyzing different aspects of the same topic as well as other texts and source materials on that topic.

V. Additional Key Criteria for Student Reading, Writing, Listening, and Speaking

1. ***Materials provide systematic opportunities for students to read complex text with fluency.*** Fluency describes the pace and accuracy with which students read — the extent to which students adjust the pace, stress, and tone of their reading to respond to the words in the text. Often, students who are behind face fluency challenges and need more practice reading sufficiently complex text. Materials aligned with the Common Core State Standards should draw on the connections between the Speaking and Listening Standards and the Reading Standards on fluency to provide opportunities for students to develop this important skill (e.g., rehearsing an oral performance of a written piece has the built-in benefit of promoting reading fluency).
2. ***Materials help teachers plan substantive academic discussions.*** In accordance with the Speaking and Listening Standards, materials aligned with the Common Core State Standards should show teachers how to plan engaging discussions around grade-level topics and texts that students have studied and researched in advance. Speaking and Listening prompts and questions should offer opportunities for students to share preparation, evidence, and research — real, substantive discussions that require students to respond directly to the ideas of their peers. Materials should highlight strengthening students' listening skills as well as their ability to respond to and challenge their peers with relevant follow-up questions and evidence.

3. *Materials use multimedia and technology to deepen attention to evidence and texts.*

The Common Core State Standards require students to compare the knowledge they gain from reading texts to the knowledge they gain from other multimedia sources, such as video. The Standards for Reading Literature specifically require students to observe different productions of the same play to assess how each production interprets evidence from the script. Materials aligned with the Common Core State Standards therefore should use multimedia and technology in a way that engages students in absorbing or expressing details of the text rather than becoming a distraction or replacement for engaging with the text.

4. *Materials embrace the most significant grammar and language conventions.* The

Language Standards provide a focus for instruction each year to ensure that students gain adequate mastery of the essential “rules” of standard written and spoken English. They also push students to learn how to approach language as a matter of craft so they can communicate clearly and powerfully. In addition to meeting each year’s grade-specific standards, students are expected to retain and further develop skills and understandings mastered in preceding grades. Thus, aligned materials should demonstrate that they explicitly and effectively support student mastery of the full range of grammar and conventions as they are applied in increasingly sophisticated contexts. The materials should also indicate when students should adhere to formal conventions and when they are speaking and writing for a less formal purpose.

CONCLUSION: EFFICACY OF ALIGNED MATERIALS

Curriculum materials must have a clear and documented research base. The most important evidence is that the curriculum accelerates student progress toward career and college readiness. It can be surprising which questions, tasks, and instructions provoke the most productive engagement with text, accelerate student growth, and deepen instructor facility with the materials. A great deal of the material designed for the standards will by necessity be new, but as much as possible the work should be based on research and developed and refined through actual testing in classrooms. Publishers should provide a clear research plan for how the efficacy of their materials will be assessed and improved over time. Revisions should be based on evidence of actual use and results with a wide range of students, including English language learners.

History/Social Studies, Science, and Technical Subjects Literacy Curricula, Grades 6–12

INTRODUCTION

This brief addendum to the publishers' criteria for ELA in grades 3–12 focuses on the portions of those criteria most relevant to materials in history/social studies, science, and technical subjects. In the criteria that follow, we restate several of the key points from the ELA criteria as they relate to these content areas and add others that are particularly significant. As was the case with ELA, what follows is not an exhaustive list but the most significant elements of the Common Core State Standards to be mindful of when revising and developing aligned materials.

Meeting the demands of the Literacy Standards requires substantially expanding the literacy requirements in history/social studies as well as in science and technical subjects. The adoption of the Literacy Standards in History/Social Studies, Science, and Technical Subjects therefore requires several significant shifts in these curricula. Specifically, in alignment with NAEP, the standards require that in grades 6–12, student reading across the curriculum must include a balance of texts that is one-third literary, one-third history/social studies, and one-third science. Specific standards (pp. 60–66) define the actual literacy skills for which history/social studies, science, and technical teachers are responsible. (Appendix B of the Common Core State Standards contains a sampling of texts of appropriate quality and complexity for study in these disciplines.)

I. Text Selection

1. **Text Complexity:** The Common Core State Standards require students to read increasingly complex texts with growing independence as they progress toward career and college readiness.

A. Texts for each grade align with the complexity requirements outlined in the standards. Reading Standard 10 outlines the level of text complexity at which students need to demonstrate comprehension in each grade. (Appendix A in the Common Core State Standards gives further information on how text complexity can be measured and offers guidance to teachers and curriculum developers on selecting the texts their students read.)³ Research makes clear that the complexity levels of the texts students are presently required to read are significantly below what is required to achieve college and career readiness. The Common Core State Standards hinge on students encountering appropriately complex texts at each grade level to develop the mature language skills and the conceptual knowledge they need for success in school and life. Instructional materials should also offer advanced texts to provide students at every grade with the opportunity to read texts beyond their current grade level to prepare them for the challenges of more complex text.

³ A working group has developed clear, common standards for measuring text complexity that are consistent across different curricula and publishers. These measures blend quantitative and qualitative factors and are being widely shared and made available to publishers and curriculum developers. The measures are based on the principles laid out in Appendix A and have been further developed and refined. These criteria recognize the critical role that teachers play in text selection.

B. All students (including those who are behind) have extensive opportunities to encounter grade-level complex text. Far too often, students who have fallen behind are only given less complex texts rather than the support they need to read texts at the appropriate level of complexity. Complex text is a rich repository of information which all readers learn how to access, although some students will need more scaffolding to do so. Curriculum developers and teachers have the flexibility to build progressions of text within grade-level bands that overlap to a limited degree with earlier bands (e.g., grades 4–5 and grades 6–8).

Curriculum materials should provide extensive opportunities for all students in a classroom to engage with complex text, although students whose reading ability is developing at a slower rate also will need supplementary opportunities to read text they can comprehend successfully without extensive supports. These students may also need extra assistance with fluency practice and vocabulary building. Students who need additional assistance, however, must not miss out on essential practice and instruction their classmates are receiving to help them read closely, think deeply about texts, participate in thoughtful discussions, and gain knowledge of both words and the world.

2. Range and Quality of Texts: The Common Core State Standards require a keen focus on informational text.

A. Curricula provide texts that are valuable sources of information. Informational texts in science, history, and technical subjects may or may not exhibit literary craft, but they should be worth reading as valuable sources of information to gain important knowledge. It is essential that the scientific and historical texts chosen for careful study be focused on such significant topics that they are worth the instructional time for students to examine them deliberately to develop a full understanding. To encourage close reading on a regular basis, many of these texts should be short enough to enable thorough examination. Students should also be required to assimilate larger volumes of content-area text to demonstrate college and career readiness. Discussion of extended or longer texts should span the entire text while also creating a series of questions that demonstrate how careful attention to specific passages within the text provides opportunities for close reading. Focusing on extended texts will enable students to develop the stamina and persistence they need to read and extract knowledge and insight from larger volumes of material. Not only do students need to be able to read closely, but they also need to be able to read larger volumes of text when necessary for research or other purposes.

B. Curricula include opportunities to combine quantitative information derived from charts and other visual formats and media with information derived from text. An important part of building knowledge in history/social studies, science, and technical subjects is integrating information drawn from different formats and media. For example, the Reading Standards require students to integrate the knowledge they gain from quantitative data with information they gain from a single or multiple written text sources. Therefore, materials aligned with the Common Core State

Standards might require students to compare their own experimental results to results about which they have read, and integrate information from video or other media with what they learn from text.

II. Questions and Tasks

1. **High-Quality Text-Dependent Questions and Tasks:** Among the highest priorities of the Common Core State Standards is that students be able to read closely and gain knowledge from texts.

A. **Curricula provide opportunities for students to build knowledge through close reading of a specific text or texts.** As in the ELA Reading Standards, the large majority of the Literacy Standards for History/Social Studies, Science, and Technical Subjects require that aligned curricula include high-quality questions and tasks that are text dependent. Such questions should encourage students to “read like a detective” by prompting relevant and central inquiries into the meaning of the source material that can be answered only through close attention to the text. The Literacy Standards therefore require students to demonstrate their ability to follow the details of what is explicitly stated, make valid inferences that logically follow from what is stated, and draw knowledge from the text. Student background knowledge and experiences can illuminate the reading but should not replace attention to the text itself.

Materials should design opportunities for close reading of selected passages from extended or longer texts and create a series of questions that demonstrate how close attention to those passages allows students to gather evidence and knowledge from the text. This text-dependent approach can and should be applied to building knowledge from the comparison and synthesis of multiple sources in science and history. (It bears noting that science includes many non-text sources such as experiments, observations, and discourse around these scientific activities.) Once each source is read and understood carefully, attention should be given to integrating what students have just read with what they have read and learned previously. How does what they have just read compare to what they have learned before? Drawing upon relevant prior knowledge, how does the text expand or challenge that knowledge? As students apply knowledge and concepts gained through reading to build a more coherent understanding of a subject, productive connections and comparisons across texts and ideas should bring students back to careful reading of specific texts. Gathering text evidence is equally crucial when dealing with larger volumes of text for research or other purposes.

B. **All activities involving text require that students demonstrate increasing mastery of evidence drawn from text.** The Common Core State Standards require students to become more adept at drawing evidence from the text and explaining that evidence orally and in writing. Aligned curriculum materials should include explicit models of a range of high-quality evidence-based answers to questions — samples of proficient student responses — about specific texts from each grade. Questions should require students to demonstrate that they follow the details of what is explicitly stated and are able to make nontrivial inferences beyond what is explicitly stated in the text regarding what logically follows from the evidence in the text. Gathering text evidence

is equally crucial when dealing with larger volumes of text for research or other purposes.

C. Questions and tasks require careful comprehension of the text before asking for further evaluation and interpretation. The Common Core State Standards call for students to demonstrate a careful understanding of what they read before engaging their opinions, appraisals, or interpretations. Aligned materials should therefore require students to demonstrate that they have followed the details and logic of an author’s argument before they are asked to evaluate the thesis or compare the thesis to others. Before students are asked to go beyond the text and apply their learning, they should demonstrate their grasp of the specific ideas and details of the text.

2. Cultivating Students’ Ability To Read Complex Texts Independently: Another key priority of the Common Core State Standards is a requirement that students be able to demonstrate their independent capacity to read at the appropriate level of complexity and depth. Aligned materials therefore should guide teachers to provide scaffolding to students but also gradually remove those supports by including tasks that require students to demonstrate their independent capacity to read and write in every domain at the appropriate level of complexity and sophistication.

A. Scaffolds enable all students to experience rather than avoid the complexity of the text. Many students will need careful instruction — including effective scaffolding — to enable them to read at the level of text complexity required by the Common Core State Standards. However, the scaffolding should not preempt or replace the text by translating its contents for students or telling students what they are going to learn in advance of reading the text; the scaffolding should not become an alternate, simpler source of information that diminishes the need for students to read the text itself carefully. Effective scaffolding aligned with the standards should result in the reader encountering the text on its own terms, with instructions providing helpful directions that focus students on the text. Follow-up support should guide readers in the use of appropriate strategies and habits when encountering places in the text where they might struggle. When productive struggle with the text is exhausted, questions rather than explanations can help focus the student’s attention on key phrases and statements in the text or on the organization of ideas in the paragraph or the work as a whole.

When necessary, extra textual scaffolding prior to and during the first read should focus on words and concepts that are essential to a basic understanding and that students are not likely to know or be able to determine from context. Supports should be designed to serve a wide range of readers, including those English language learners and other students who are especially challenged by the complex text before them. Texts and the discussion questions should be selected and ordered so that they bootstrap onto each other and promote deep thinking and substantive engagement with the text.

B. Design for whole-group, small-group, and individual instruction cultivates student responsibility and independence. It is essential that questions, tasks, and activities are designed to ensure that all students are actively engaged in reading. Materials should

provide opportunities for students to participate in real, substantive discussions that require them to respond directly to the ideas of their peers. Teachers can begin by asking the kind and level of questions appropriate to the reading and then students should be prompted to ask high-quality questions about what they are reading to further comprehension and analysis. Writing about text is also an effective way to elicit this active engagement. Students should have opportunities to use writing to clarify, examine, and organize their own thinking, so reading materials should provide effective ongoing prompts for students to analyze texts in writing. Instructional materials should be designed to devote sufficient time in class to students encountering text without scaffolding, as they often will in college- and career-ready environments. A significant portion of the time spent with each text should provide opportunities for students to work independently within and outside of class on analyzing the text because this independent analysis is required by the standards.

III. Academic (and Domain-Specific) Vocabulary

Materials focus on academic vocabulary prevalent in complex texts throughout reading, writing, listening, and speaking instruction. The Common Core State Standards require a focus on academic vocabulary that is prevalent in more complex texts as well as domain-specific words. Academic vocabulary (described in more detail as Tier 2 words in Appendix A of the Common Core State Standards) includes those words that readers will find in all types of complex texts from different disciplines. Materials aligned with the Common Core State Standards should help students acquire knowledge of general academic vocabulary in addition to domain-specific words because these words will help students access a range of complex texts in diverse subject areas.

Aligned materials should guide students to gather as much as they can about the meaning of these words from the context of how they are being used in the text, while offering support for vocabulary when students are not likely to be able to figure out their meanings from the text alone. As the meanings of words vary with the context, the more varied the context provided to teach the meaning of a word is, the more effective the results will be (e.g., a state was admitted to the Union; he admitted his errors; admission was too expensive). In alignment with the standards, materials should also require students to explain the impact of specific word choices on the text. Materials and activities should also provide ample opportunities for students to practice the use of academic vocabulary in their speaking and writing.

Some students, including some English language learners, will also need support in mastering high-frequency words that are not Tier 2 words but are essential to reading grade-level text. Materials should therefore offer the resources necessary for supporting students who are developing knowledge of high-frequency words. Since teachers will often not have the time to teach explicitly all of the high-frequency words required, materials should make it possible for students to learn the words' meanings on their own, providing such things as student-friendly definitions for high-frequency words whose meanings cannot be inferred from the context. It also can be useful for English language learners to highlight explicitly and link cognates of key words with other languages.

IV. Writing to Sources and Research

1. **Materials portray writing to sources as a key task.** Crafting an argument frequently relies on using information; similarly, an analysis of a subject will include argumentative elements. While these forms are not strictly independent, what is critical to both forms of writing is the use and integration of evidence. In historical, technical, and scientific writing, accuracy matters, and students should demonstrate their knowledge through precision and detail.
2. **Materials make it clear that student writing should be responsive to the needs of the audience and the particulars of the text in question.** As the standards are silent on length and structure, student writing should not be evaluated by whether it follows a traditional format or formula (e.g. the five paragraph essay). Instead, the Common Core State Standards have been carefully designed to focus on the elements or characteristics of good writing including drawing sufficient evidence from texts, writing coherently with well-developed ideas, and writing clearly with sufficient command of standard English.
3. **Students are given extensive practice with short, focused research projects.** Writing Standard 7 emphasizes that students should conduct several short research projects in addition to more sustained research efforts. Materials should require several of these short research projects annually to enable students to repeat the research process many times and develop the expertise needed to conduct research independently. A progression of shorter research projects also encourages students to develop expertise in one area by confronting and analyzing different aspects of the same topic as well as other texts and source materials on that topic.

Appendix: The Publishers' Criteria for the Common Core State Standards

Mathematics, Grades K–8



K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics

These Standards are not intended to be new names for old ways of doing business. They are a call to take the next step. ... It is time to recognize that standards are not just promises to our children, but promises we intend to keep.

–CCSSM, p. 5

The Common Core State Standards were developed through a bipartisan, state-led initiative spearheaded by state superintendents and state governors. The Standards reflect the collective expertise of hundreds of teachers, education researchers, mathematicians, and state content experts from across the country. The Standards build on the best of previous state standards plus a large body of evidence from international comparisons and domestic reports and recommendations to define a sturdy staircase to college and career readiness. Most states have now adopted the Standards to replace previous expectations in English language arts/literacy and mathematics.

Standards by themselves cannot raise achievement. Standards don’t stay up late at night working on lesson plans, or stay after school making sure every student learns—it’s teachers who do that. And standards don’t implement themselves. Education leaders from the state board to the building principal must make the Standards a reality in schools. Publishers too have a crucial role to play in providing the tools that teachers and students need to meet higher standards. This document, developed by the CCSSM writing team with review and collaboration from partner organizations, individual experts, and districts using the criteria, aims to support faithful CCSSM implementation by providing criteria for materials aligned to the Common Core State Standards for Mathematics. States, districts, and publishers can use these criteria to develop, evaluate, or purchase aligned materials, or to supplement or modify existing materials to remedy weaknesses.

How should alignment be judged? Traditionally, judging alignment has been approached as a crosswalking exercise. But crosswalking can result in large percentages of “aligned content” while obscuring the fact that the materials in question align not at all to the letter or the spirit of the standards being implemented. These criteria are an attempt to sharpen the alignment question and make alignment and misalignment more clearly visible.

These criteria were developed from the perspective that publishers and purchasers are equally responsible for fixing the materials market. Publishers cannot deliver focus to buyers who only ever complain about what has been left out, yet never complain about what has crept in. More generally, publishers cannot invest in quality if the market doesn’t demand it of them nor reward them for producing it.

The K–8 Publishers’ Criteria are structured as follows:

- I. Focus, Coherence, and Rigor in the Common Core State Standards for Mathematics
- II. Criteria for Materials and Tools Aligned to the K–8 Standards
- III. Appendix: “The Structure is the Standards”

I. Focus, Coherence, and Rigor in the Common Core State Standards for Mathematics

Less topic coverage can be associated with higher scores on those topics covered because students have more time to master the content that is taught.

—Ginsburg et al., 2005, *Reassessing U.S. International Mathematics Performance: New Findings from the 2003 TIMSS and PISA*

This finding that postsecondary instructors target fewer skills as being of high importance is consistent with recent policy statements and findings raising concerns that some states require too many standards to be taught and measured, rather than focusing on the most important state standards for students to attain. ...

Because the postsecondary survey results indicate that a more rigorous treatment of fundamental content knowledge and skills needed for credit-bearing college courses would better prepare students for postsecondary school and work, states would likely benefit from examining their state standards and, where necessary, reducing them to focus only on the knowledge and skills that research shows are essential to college and career readiness and postsecondary success. ...

—ACT National Curriculum Survey 2009

Because the mathematics concepts in [U.S.] textbooks are often weak, the presentation becomes more mechanical than is ideal. We looked at both traditional and non-traditional textbooks used in the US and found conceptual weakness in both.

—Ginsburg et al., 2005, cited in CCSSM, p. 3

...[B]ecause conventional textbook coverage is so fractured, unfocused, superficial, and unprioritized, there is no guarantee that most students will come out knowing the essential concepts of algebra.

—Wiggins, 2012¹

For years national reports have called for greater focus in U.S. mathematics education. TIMSS and other international studies have concluded that mathematics education in the United States is a mile wide and an inch deep. A mile-wide inch-deep curriculum translates to less time per topic. Less time means less depth and moving on without many students. In high-performing countries, strong foundations are laid and then further knowledge is built on them; the design principle in those countries is focus with coherent progressions. The U.S. has lacked such discipline and patience.

There is evidence that state standards have become somewhat more focused over the past decade. But in the absence of standards shared across states, instructional materials have not followed suit. Moreover, prior to the Common Core, state standards were making little progress in terms of coherence: states were not fueling achievement by organizing math so that the subject makes sense.

With the advent of the Common Core, a decade's worth of recommendations for greater focus and coherence finally have a chance to bear fruit. Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics.² These principles are meant to fuel greater achievement in a deep and rigorous curriculum, one in which students acquire

¹ From <http://grantwiggins.wordpress.com/2012/02/01/a-postscript-to-my-comment-about-kids-having-trouble-with-the-distributive-property/>.

² For some of the sources of evidence consulted during the standards development process, see pp. 91–93 of CCSSM.

conceptual understanding, procedural skill and fluency, and the ability to apply mathematics to solve problems. Thus, the implications of the standards for mathematics education could be summarized briefly as follows:

- Focus:** focus strongly where the standards focus
- Coherence:** think across grades, and link to major topics in each grade
- Rigor:** in major topics, pursue with equal intensity
- conceptual understanding,
 - procedural skill and fluency, and
 - applications

Focus

Focus means significantly narrowing the scope of content in each grade so that students achieve at higher levels and experience more deeply that which remains.

We have come to see “narrowing” as a bad word—and it is a bad word, if it means cutting arts programs and language programs. But math has swelled in this country. The standards are telling us that math actually needs to lose a few pounds.

The strong focus of the Standards in early grades is arithmetic along with the components of measurement that support it. That includes the concepts underlying arithmetic, the skills of arithmetic computation, and the ability to apply arithmetic to solve problems and put arithmetic to engaging uses. Arithmetic in the K–5 standards is an important life skill, as well as a thinking subject and a rehearsal for algebra in the middle grades.

Focus remains important through the middle and high school grades in order to prepare students for college and careers. National surveys have repeatedly concluded that postsecondary instructors value greater mastery of a smaller set of prerequisites over shallow exposure to a wide array of topics, so that students can build on what they know and apply what they know to solve substantial problems.

During the writing of the Standards, the writing team often received feedback along these lines: “I love the focus of these standards! Now, if we could just add one or two more things...” But focus compromised is no longer focus at all. Faithfully implementing the standards requires moving some topics traditionally taught in earlier grades up to higher grades entirely, sometimes to much higher grades. “Teaching less, learning more” can seem like hard medicine for an educational system addicted to coverage. But remember that the goal of focus is to make good on the ambitious promise the states have made to their students by adopting the Standards: greater achievement at the college- and career-ready level, greater depth of understanding of mathematics, and a rich classroom environment in which reasoning, sense-making, applications, and a range of mathematical practices all thrive. None of this is realistic in a mile-wide, inch-deep world.

Both of the assessment consortia have made the focus, coherence, and rigor of the Standards central to their assessment designs.³ Choosing materials that also embody the Standards will be essential for giving teachers and students the tools they need to build a strong mathematical foundation and succeed on the coming aligned exams.

Coherence

Coherence is about making math make sense. Mathematics is not a list of disconnected tricks or mnemonics. It is an elegant subject in which powerful knowledge results from reasoning with a small number of principles such as place value and properties of operations.⁴ The Standards define progressions of learning that leverage these principles as they build knowledge over the grades.⁵

Coherence has to do with connections between topics. Vertical connections are crucial: these are the links from one grade to the next that allow students to progress in their mathematical education. For example, a kindergarten student might add two numbers using a “count all” strategy, but grade 1 students are expected to use “counting on” and more sophisticated strategies. It is critical to think across grades and examine the progressions in the standards to see how major content develops over time.

The Standards do not specify the progression of material within a single grade, but coherence across grades also depends on having careful, deliberate, and progressive development of ideas within each grade. Some examples of this can be seen in the *Progressions* documents.⁶ For example, it would not make sense to address cluster 8.EE.B (understanding the connections between proportional relationships, lines, and linear equations) before addressing triangle similarity, as ideas of triangle similarity underlie the very definition of the slope of a line in the coordinate plane.

Connections at a single grade level can be used to improve focus, by closely linking secondary topics to the major work of the grade. For example, in grade 3, bar graphs are not “just another topic to cover.” Rather, the standard about bar graphs asks students to use information presented in bar graphs to solve word problems using the four operations of arithmetic. Instead of allowing bar graphs to detract from the focus on arithmetic, the Standards are showing how bar graphs can be positioned in support of the major work of the grade. In this way coherence can support focus.

Materials cannot match the contours of the Standards by approaching each individual content standard as a separate event. Nor can materials align to the Standards by approaching each individual grade as a separate event. From the Appendix: “The standards were not so much assembled out of topics as woven out of progressions. Maintaining these progressions in the implementation of the standards will be important for helping all students learn mathematics at a higher level. ... For example, the properties of operations, learned first for simple whole numbers, then in later grades extended to fractions, play a central role in understanding operations with negative numbers,

³ See the Smarter/Balanced content specification and item development specifications, and the PARCC Model Content Framework and item development ITN. Complete information about the consortia can be found at www.smarterbalanced.org and www.parcconline.org.

⁴ For some remarks by Phil Daro on this theme, see the excerpt at <http://vimeo.com/achievethecore/darofocus>, and/or the full video available at <http://commoncoretools.me/2012/05/21/phil-daro-on-learning-mathematics-through-problem-solving/>.

⁵ For more information on progressions in the Standards, see <http://ime.math.arizona.edu/progressions>.

⁶ <http://ime.math.arizona.edu/progressions>

expressions with letters and later still the study of polynomials. As the application of the properties is extended over the grades, an understanding of how the properties of operations work together should deepen and develop into one of the most fundamental insights into algebra. The natural distribution of prior knowledge in classrooms should not prompt abandoning instruction in grade level content, but should prompt explicit attention to connecting grade level content to content from prior learning. To do this, instruction should reflect the progressions on which the CCSSM are built.”

“Fragmenting the Standards into individual standards, or individual bits of standards, ... produces a sum of parts that is decidedly less than the whole” (Appendix). Breaking down standards poses a threat to the focus and coherence of the Standards. It is sometimes helpful or necessary to isolate a part of a compound standard for instruction or assessment, but not always, and not at the expense of the Standards as a whole. A drive to break the Standards down into ‘microstandards’ risks making the checklist mentality even worse than it is today. Microstandards would also make it easier for microtasks and microlessons to drive out extended tasks and deep learning. Finally, microstandards could allow for micromanagement: Picture teachers and students being held accountable for ever more discrete performances. If it is bad today when principals force teachers to write the standard of the day on the board, think of how it would be if every single standard turns into three, six, or a dozen or more microstandards. If the Standards are like a tree, then microstandards are like twigs. You can’t build a tree out of twigs, but you can use twigs as kindling to burn down a tree.

Rigor

To help students meet the expectations of the Standards, educators will need to pursue, with equal intensity, three aspects of rigor in the major work of each grade: (1) conceptual understanding, (2) procedural skill and fluency, and (3) applications. The word “rigor” isn’t a code word for just one of these three; rather, it means equal intensity in all three. The word “understand” is used in the Standards to set explicit expectations for conceptual understanding, the word “fluently” is used to set explicit expectations for fluency, and the phrase “real-world problems” and the star symbol (★) are used to set expectations and flag opportunities for applications and modeling. (Modeling is a Standard for Mathematical Practice as well as a content category in High School.)

To date, curricula have not always been balanced in their approach to these three aspects of rigor. Some curricula stress fluency in computation without acknowledging the role of conceptual understanding in attaining fluency and making algorithms more learnable. Some stress conceptual understanding without acknowledging that fluency requires separate classroom work of a different nature. Some stress pure mathematics without acknowledging that applications can be highly motivating for students and that a mathematical education should make students fit for more than just their next mathematics course. At another extreme, some curricula focus on applications without acknowledging that math doesn’t teach itself.

The Standards do not take sides in these ways, but rather they set high expectations for all three components of rigor in the major work of each grade. Of course, that makes it necessary that we focus—otherwise we are asking teachers and students to do more with less.

II. Criteria for Materials and Tools Aligned to the Standards

The single most important flaw in United States mathematics instruction is that the curriculum is “a mile wide and an inch deep.” This finding comes from research comparing the U.S. curriculum to high performing countries, surveys of college faculty and teachers, the National Math Panel, the Early Childhood Learning Report, and all the testimony the CCSS writers heard. The standards are meant to be a blueprint for math instruction that is more focused and coherent. ... Crosswalks and alignments and pacing plans and such cannot be allowed to throw away the focus and coherence and regress to the mile-wide curriculum.

—Daro, McCallum, and Zimba, 2012 (from the Appendix)

Using the criteria

One approach to developing a document such as this one would have been to develop a separate criterion for each mathematical topic approached in deeper ways in the Standards, a separate criterion for each of the Standards for Mathematical Practice, etc. It is indeed necessary for textbooks to align to the Standards in detailed ways. However, enumerating those details here would have led to a very large number of criteria. Instead, the criteria use the Standards’ focus, coherence, and rigor as the main themes. In addition, this document includes a section on indicators of quality in materials and tools, as well as a criterion for the mathematics and statistics in instructional resources for science and technical subjects. Note that the criteria apply to materials and tools, not to teachers or teaching.

The criteria can be used in several ways:

- *Informing purchases and adoptions.* Schools or districts evaluating materials and tools for purchase can use the criteria to test claims of alignment. States reviewing materials and tools for adoption can incorporate these criteria into their rubrics. Publishers currently modifying their programs, or designing new materials and tools, can use the criteria to shape these projects.
- *Working with previously purchased materials.* Most existing materials and tools likely fail to meet one or more of these criteria, even in cases where alignment to the Standards is claimed. But the pattern of failure is likely to be informative. States and districts need not wait for “the perfect book” to arrive, but can use the criteria now to carry out a thoughtful plan to modify or combine existing resources in such a way that students’ actual learning experiences approach the focus, coherence, and rigor of the Standards. Publishers can develop innovative materials and tools specifically aimed at addressing identified weaknesses of widespread textbooks or programs.
- *Guiding the development of materials.* Publishers currently modifying their programs and designers of new materials and tools can use the criteria to shape these projects.
- *Professional development.* The criteria can be used to support activities that help communicate the shifts in the Standards. For example, teachers can analyze existing materials to reveal how they treat the major work of the grade, or assess how well materials attend to the three aspects of rigor, or determine which problems are key to developing the ideas and skills of the grade.

In all these cases, it is recommended that the criteria for focus be attended to first. By attending first to focus, coherence and rigor may realistically develop.

The Standards do not dictate the acceptable forms of instructional resources—to the contrary, they are a historic opportunity to raise student achievement through innovation. Materials and tools of very different forms can meet the criteria, including workbooks, multi-year programs, and targeted interventions. For example, materials and tools that treat a single important topic or domain might be valuable to consider.

Alignment for digital and online materials and tools. Digital materials offer substantial promise for conveying mathematics in new and vivid ways and customizing learning. In a digital or online format, diving deeper and reaching back and forth across the grades is easy and often useful. That can enhance focus and coherence. But if such capabilities are poorly designed, focus and coherence could also be diminished. In a setting of dynamic content navigation, the navigation experience must preserve the coherence of Standards clusters and progressions while allowing flexibility and user control: Users can readily see where they are with respect to the structure of the curriculum and its basis in the Standards’ domains, clusters and standards.

Digital materials that are smaller than a course can be useful. The smallest granularity for which they can be properly evaluated is a cluster of standards. These criteria can be adapted for clusters of standards or progressions within a cluster, but might not make sense for isolated standards.

Special populations. As noted in the Standards (p. 4),

All students must have the opportunity to learn and meet the same high standards if they are to access the knowledge and skills necessary in their post-school lives. The Standards should be read as allowing for the widest possible range of students to participate fully from the outset, along with appropriate accommodations to ensure maximum participation of students with special education needs.

Thus, **an over-arching criterion** for materials and tools is that they provide supports for special populations such as students with disabilities, English language learners,⁷ and gifted students. Designers of materials should consult accepted guidelines for providing these supports.

*

For the sake of brevity, the criteria sometimes refer to parts of the Standards using abbreviations such as 3.MD.7 (an individual content standard), MP.8 (a practice standard), 8.EE.B (a cluster heading), or 4.NBT (a domain heading). Readers of the document should have a copy of the Standards available in order to refer to the indicated text in each case.

⁷ Slides from a brief and informal presentation by Phil Daro about mathematical language and English language learners can be found at <http://db.tt/VARV3eh1>.

Criteria for Materials and Tools Aligned to the Standards

1. **Focus on Major Work: In any single grade, students and teachers using the materials as designed spend the large majority of their time on the major work of each grade.**⁸ In order to preserve the focus and coherence of the Standards, both assessment consortia have designated clusters at each grade level as major, additional, or supporting,⁹ with clusters designated as major comprising the major work of each grade. Major work is not the only work in the Standards, but materials are highly unlikely to be aligned to the Standards' focus unless they dedicate the large majority of their time¹⁰ on the major work of each grade.

This criterion also applies to digital or online materials without fixed pacing plans. Such tools are explicitly designed for focus, so that students spend the large majority of their time on the major work of each grade.

Note that an important **subset** of the major work in grades K–8 is the progression that leads toward middle-school algebra (see Table 1, next page). Materials give especially careful treatment to these clusters and their interconnections.¹¹

⁸ The materials should devote at least 65% and up to approximately 85% of the class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

⁹ For cluster-level emphases at grades K–2, see <http://www.achievethecore.org/downloads/Math%20Shifts%20and%20Major%20Work%20of%20Grade.pdf>.

¹⁰ The materials should devote at least 65% and up to approximately 85% of the class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

¹¹ For domain-by-domain progressions in the Standards, see <http://jme.math.arizona.edu/progressions>.

Table 1. Progress to Algebra in Grades K–8

K	1	2	3	4	5	6	7	8
Know number names and the count sequence	Represent and solve problems involving addition and subtraction		Represent & solve problems involving multiplication and division	Use the four operations with whole numbers to solve problems	Understand the place value system	Apply and extend previous understandings of multiplication and division to divide fractions by fractions		
Count to tell the number of objects	Understand and apply properties of operations and the relationship between addition and subtraction	Represent and solve problems involving addition and subtraction	Understand properties of multiplication and the relationship between multiplication and division	Generalize place value understanding for multi-digit whole numbers	Perform operations with multi-digit whole numbers and decimals to hundredths	Apply and extend previous understandings of numbers to the system of rational numbers	Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers	Work with radical and integer exponents
Compare numbers		Add and subtract within 20	Multiply & divide within 100	Use place value understanding and properties of operations to perform multi-digit arithmetic	Use equivalent fractions as a strategy to add and subtract fractions			Understand the connections between proportional relationships, lines, and linear equations**
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from	Add and subtract within 20	Understand place value	Solve problems involving the four operations, and identify & explain patterns in arithmetic	Extend understanding of fraction equivalence and ordering	Apply and extend previous understandings of multiplication and division to multiply and divide fractions	Understand ratio concepts and use ratio reasoning to solve problems	Analyze proportional relationship and use them to solve real-world and mathematical problems	Analyze and solve linear equations and pairs of simultaneous linear equations
Work with numbers 11-19 to gain foundations for place value	Work with addition and subtraction equations	Use place value understanding and properties of operations to add and subtract	Develop understanding of fractions as numbers	Build fractions from unit fractions by applying and extending previous understandings of operations	Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition	Apply and extend previous understandings of arithmetic to algebraic expressions	Use properties of operations to generate equivalent expressions	Define, evaluate, and compare functions
	Extend the counting sequence	Measure and estimate lengths in standard units	Solve problems involving measurement and estimation of intervals of time, liquid volumes, & masses of objects			Reason about and solve one-variable equations and inequalities	Solve real-life and mathematical problems using numerical and algebraic expressions and equations	Use functions to model relationships between quantities
	Understand place value	Relate addition and subtraction to length	Geometric measurement: understand concepts of area and relate area to multiplication and to addition	Understand decimal notation for fractions, and compare decimal fractions	Graph points in the coordinate plane to solve real-world and mathematical problems*	Represent and analyze quantitative relationships between dependent and independent variables		

*Indicates a cluster that is well thought of as part of a student's progress to algebra, but that is currently not designated as Major by one or both of the assessment consortia in their draft materials. Apart from the asterisked exception, the clusters listed here are a subset of those designated as Major in both of the assessment consortia's draft documents. ** Depends on similarity ideas from geometry to show that slope can be defined and then used to show that a linear equation has a graph which is a straight line and conversely.

2. **Focus in Early Grades: Materials do not assess any of the following topics before the grade level indicated.**

Table 2

Topic	Grade Introduced in the Standards
Probability , including chance, likely outcomes, probability models.	7
Statistical distributions , including center, variation, clumping, outliers, mean, median, mode, range, quartiles, and statistical association or trends , including two-way tables, bivariate measurement data, scatter plots, trend line, line of best fit, correlation.	6
Similarity, congruence, or geometric transformations.	8
Symmetry of shapes, including line/reflection symmetry, rotational symmetry.	4

As the second column indicates, the Standards as a whole do include the topics in Table 2—they are not being left out. However, in the coherent progression of the Standards, these topics first appear at later grades in order to establish focus. Thus, in aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any of the above topics before the grade in which they are introduced in the Standards. (One way to meet this criterion is for materials to omit these topics entirely prior to the indicated grades.)

3. **Focus and Coherence through Supporting Work: Supporting content enhances focus and coherence simultaneously by engaging students in the major work of the grade.** For example, materials for K–5 generally treat data displays as an occasion for solving grade-level word problems using the four operations (see 3.MD.3);¹² materials for grade 7 take advantage of opportunities to use probability to support ratios, proportions, and percents. (This criterion does not apply in the case of targeted supplemental materials or other tools that do not include supporting content.)
4. **Rigor and Balance: Materials and tools reflect the balances in the Standards and help students meet the Standards’ rigorous expectations, by (all of the following, in the case of comprehensive materials; at least one of the following for supplemental or targeted resources):**
- Developing students’ conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.** Materials amply feature high-quality conceptual problems and questions. This includes brief conceptual problems with low computational difficulty (e.g., ‘Find a number greater than $1/5$ and less than $1/4$ ’); brief

¹² For more information about this example, see Table 1 in the *Progression for K-3 Categorical Data and 2-5 Measurement Data*, http://commoncoretools.files.wordpress.com/2011/06/ccss_progression_md_k5_2011_06_20.pdf. More generally, the *PARCC Model Content Frameworks* give examples in each grade of how to improve focus and coherence by linking supporting topics to the major work.

conceptual questions (e.g., ‘If the divisor does not change and the dividend increases, what happens to the quotient?’); and problems that involve identifying correspondences across different mathematical representations of quantitative relationships.¹³ Classroom discussion about such problems can offer opportunities to engage in mathematical practices such as constructing and critiquing arguments (MP.3). In the materials, conceptual understanding is attended to most thoroughly in those places in the content standards where explicit expectations are set for understanding or interpreting. Such problems and activities center on fine-grained mathematical concepts—place value, the whole-number product $a \times b$, the fraction a/b , the fraction product $(a/b) \times q$, expressions as records of calculations, solving equations as a process of answering a question, etc. Conceptual understanding of key mathematical concepts is thus distinct from applications or fluency work, and these three aspects of rigor must be balanced as indicated in the Standards.

- b. **Giving attention throughout the year to individual standards that set an expectation of procedural skill and fluency.** The Standards are explicit where fluency is expected. Materials in grades K–6 help students make steady progress throughout the year toward fluent (accurate and reasonably fast) computation, including knowing single-digit products and sums from memory (see, e.g., 2.OA.2 and 3.OA.7). Progress toward these goals is interwoven with students’ developing conceptual understanding of the operations in question.¹⁴ Manipulatives and concrete representations such as diagrams that enhance conceptual understanding are connected to the written and symbolic methods to which they refer (see, e.g., 1.NBT). As well, purely procedural problems and exercises are present. These include cases in which opportunistic strategies are valuable—e.g., the sum $698 + 240$ or the system $x + y = 1$, $2x + 2y = 3$ —as well as an ample number of generic cases so that students can learn and practice efficient algorithms (e.g., the sum $8767 + 2286$). Methods and algorithms are general and based on principles of mathematics, not mnemonics or tricks.¹⁵ Materials attend most thoroughly to those places in the content standards where explicit expectations are set for fluency. In higher grades, algebra is the language of much of mathematics. Like learning any language, we learn by using it. Sufficient practice with algebraic operations is provided so as to make realistic the attainment of the Standards as a whole; for example, fluency in algebra can help students get past the need to manage computational details so that they can observe structure (MP.7) and express regularity in repeated reasoning (MP.8).

- c. **Allowing teachers and students using the materials as designed to spend sufficient time working with engaging applications, without losing focus on the major work of each grade.** Materials in grades K–8 include an ample number of single-step and multi-step contextual problems that develop the mathematics of the grade, afford opportunities for practice, and

¹³ Note that for ELL students, multiple representations also serve as multiple access paths.

¹⁴ For more about how students develop fluency in tandem with understanding, see the *Progressions* for Operations and Algebraic Thinking: http://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_0a_k5_2011_05_302.pdf and for Number and Operations in Base Ten, http://commoncoretools.files.wordpress.com/2011/04/ccss_progression_nbt_2011_04_073.pdf.

¹⁵ Non-mathematical approaches (such as the “butterfly method” of adding fractions) compromise focus and coherence and displace mathematics in the curriculum (cf. 5.NF.1). For additional background on this point, see the remarks by Phil Daro excerpted at <http://vimeo.com/achievethecore/darofocus> and/or the full video, available at <http://commoncoretools.me/2012/05/21/phil-daro-on-learning-mathematics-through-problem-solving/>.

engage students in problem solving. Materials for grades 6–8 also include problems in which students must make their own assumptions or simplifications in order to model a situation mathematically. Applications take the form of problems to be worked on individually as well as classroom activities centered on application scenarios. Materials attend thoroughly to those places in the content standards where expectations for multi-step and real-world problems are explicit. Students learn to use the content knowledge and skills specified in the content standards in applications, with particular stress on applying major work, and a preference for the more fundamental techniques from additional and supporting work. Modeling builds slowly across K–8, and applications are relatively simple in earlier grades. Problems and activities are grade-level appropriate, with a sensible tradeoff between the sophistication of the problem and the difficulty or newness of the content knowledge the student is expected to bring to bear.

Additional aspects of the Rigor and Balance Criterion:

(1) *The three aspects of rigor are not always separate in materials.* (Conceptual understanding and fluency go hand in hand; fluency can be practiced in the context of applications; and brief applications can build conceptual understanding.)

(2) *Nor are the three aspects of rigor always together in materials.* (Fluency requires dedicated practice to that end. Rich applications cannot always be shoehorned into the mathematical topic of the day. And conceptual understanding will not always come along for free unless explicitly taught.)

(3) Digital and online materials with no fixed lesson flow or pacing plan are not designed for superficial browsing but rather should be designed to instantiate the Rigor and Balance criterion.

5. Consistent Progressions: Materials are consistent with the progressions in the Standards, by (all of the following):

a. Basing content progressions on the grade-by-grade progressions in the Standards.

Progressions in materials match well with those in the Standards. Any discrepancies in content progressions enhance the required learning in each grade and are clearly aimed at helping students meet the Standards as written, rather than setting up competing requirements or effectively rewriting the standards. Comprehensive materials do not introduce gaps in learning by omitting any content that is specified in the Standards.

The basic model for grade-to-grade progression involves students making tangible progress during each given grade, as opposed to substantially reviewing then marginally extending from previous grades. Remediation may be necessary, particularly during transition years, and resources for remediation may be provided, but previous-grades review is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.

Digital and online materials that allow students and/or teachers to navigate content across grade levels promote the Standards’ coherence by tracking the structure and progressions in the Standards. For example, such materials might link problems and concepts so that teachers and students can browse a progression.

- b. **Giving all students extensive work with grade-level problems.** Differentiation is sometimes necessary, but materials often manage unfinished learning from earlier grades inside grade level work, rather than setting aside grade-level work to reteach earlier content. Unfinished learning from earlier grades is normal and prevalent; it should not be ignored nor used as an excuse for cancelling grade level work and retreating to below-grade work. (For example, the development of fluency with division using the standard algorithm in grade 6 is the occasion to surface and deal with unfinished learning about place value; this is more productive than setting aside division and backing up.) Likewise, students who are “ready for more” can be provided with problems that take grade-level work in deeper directions, not just exposed to later grades’ topics.
- c. **Relating grade level concepts explicitly to prior knowledge from earlier grades.** The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge. Grade-level problems in the materials often involve application of knowledge learned in earlier grades. Although students may well have learned this earlier content, they have not learned how it extends to new mathematical situations and applications. They learn basic ideas of place value, for example, and then extend them across the decimal point to tenths and beyond. They learn properties of operations with whole numbers, and then extend them to fractions, variables, and expressions. The materials make these extensions of prior knowledge explicit. Thus, materials routinely integrate new knowledge with knowledge from earlier grades. Note that cluster headings in the Standards sometimes signal key moments where reorganizing and extending previous knowledge is important in order to accommodate new knowledge (e.g., see the cluster headings that use the phrase “Apply and extend previous understanding”).

6. **Coherent Connections: Materials foster coherence through connections at a single grade, where appropriate and where required by the Standards, by (all of the following):**

- a. **Including learning objectives that are visibly shaped by CCSSM cluster headings.** Cluster headings function like topic sentences in a paragraph in that they state the point of, and lend additional meaning to, the individual content standards that follow. While some clusters are simply the sum of their individual standards (e.g., 8.EE.C), many are not (e.g., 8.EE.B). In the latter case, the cluster heading signals the importance of using similarity ideas from geometry to show that slope can be defined and then used to show that a linear equation has a graph which is a straight line, and conversely.

Cluster headings can also signal multi-grade progressions, by using phrases such as “Apply and extend previous understandings of [X] to do [Y].” Hence an important criterion for coherence is that some or many of the learning objectives in the materials are visibly shaped by CCSSM cluster headings. Materials do not simply treat the Standards as a sum of individual content standards and individual practice standards.

- b. **Including problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important.** If instruction only operates at the individual standard level, or even at the individual cluster level, then some important connections will be missed. For example, robust work in 4.NBT should sometimes or often synthesize across the clusters listed in that domain;

robust work in grade 4 should sometimes or often involve students applying their developing computation NBT skills in the context of solving word problems detailed in OA. Materials do not invent connections not explicit in the standards without first attending thoroughly to the connections that are required explicitly in the Standards (e.g., 3.MD.7 connects area to multiplication, to addition, and to properties of operations) Not everything in the standards is naturally well connected or needs to be connected (e.g., Order of Operations has essentially nothing to do with the properties of operations, and connecting these two things in a lesson or unit title is actively misleading). Instead, connections in materials are mathematically natural and important (e.g., base-ten computation in the context of word problems with the four operations), reflecting plausible direct implications of what is written in the Standards without creating additional requirements.

- c. **Preserving the focus, coherence, and rigor of the Standards even when targeting specific objectives.** Sometimes a content standard is a compound statement, such as ‘Do X and do Y.’ More intricate compound forms also exist. (For example, see A-APR.1.) It is sometimes helpful or necessary to isolate a part of a compound standard, but not always, and not at the expense of the Standards as a whole. Digital or print materials or tools are not aligned if they break down the Standards in such a way as to detract from focus, coherence, or rigor. This criterion applies to student-facing and teacher-facing materials, as well as to architectural documents or digital platforms that are meant to guide the development of student-facing or teacher-facing materials.

- 7. **Practice-Content Connections: Materials meaningfully connect content standards and practice standards.** “Designers of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction.” (CCSSM, p. 8.) Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of activities or problems that stimulate students to develop the habits of mind described in the practice standards. These practices are well-grounded in the content standards.

The practice standards are not just processes with ephemeral products (such as conversations). They also specify a set of products students are supposed to learn how to produce. Thus, students are asked to produce answers and solutions but also, in a grade-appropriate way, arguments, explanations, diagrams, mathematical models, etc.

Materials are accompanied by an analysis, aimed at evaluators, of how the authors have approached each practice standard in relation to content within each applicable grade or grade band, and provide suggestions for delivering content in ways that help students meet the practice standards in grade-appropriate ways. Materials do not treat the practice standards as static across grades or grade bands, but instead tailor the connections to the content of the grade and to grade-level-appropriate student thinking. Materials also include teacher-directed materials that explain the role of the practice standards in the classroom and in students’ mathematical development.

- 8. **Focus and Coherence via Practice Standards: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.** Content and practice standards are not connected mechanistically or randomly, but instead support focus and

coherence. Examples: Materials connect looking for and making use of structure (MP.7) with structural themes emphasized in the standards such as properties of operations, place value decompositions of numbers, numerators and denominators of fractions, numerical and algebraic expressions, etc.; materials use repeated reasoning (MP.8) as a *tool* with which to explore content that is emphasized in the Standards. (In K-5, materials might use regularity in repetitive reasoning to shed light on, e.g., the 10×10 addition table, the 10×10 multiplication table, the properties of operations, the relationship between addition and subtraction or multiplication and division, and the place value system; in 6-8, materials might use regularity in repetitive reasoning to shed light on proportional relationships and linear functions; in high school, materials might use regularity in repetitive reasoning to shed light on formal algebra as well as functions, particularly recursive definitions of functions.)

9. **Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.** For example, MP.1 does not say, “Solve problems.” Or “Make sense of problems.” Or “Make sense of problems and solve them.” It says “Make sense of problems and persevere in solving them.” Thus, students using the materials as designed build their perseverance in grade-level-appropriate ways by occasionally solving problems that require them to persevere to a solution beyond the point when they would like to give up.¹⁶ MP.5 does not say, “Use tools.” Or “Use appropriate tools.” It says “Use appropriate tools strategically.” Thus, materials include problems that reward students’ strategic decisions about how to use tools, or about whether to use them at all. MP.8 does not say, “Extend patterns.” Or “Engage in repetitive reasoning.” It says “Look for and express regularity in repeated reasoning.” Thus, it is not enough for students to extend patterns or perform repeated calculations. Those repeated calculations must lead to an insight (e.g., “When I add a multiple of 3 to another multiple of 3, then I get a multiple of 3.”). The analysis for evaluators explains how the full meaning of each practice standard has been attended to in the materials.

10. **Emphasis on Mathematical Reasoning: Materials support the Standards’ emphasis on mathematical reasoning, by (all of the following):**

- a. **Prompting students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3).** Materials provide sufficient opportunities for students to reason mathematically and express reasoning through classroom discussion, written work and independent thinking. Reasoning is not confined to optional or avoidable sections of the materials but is inevitable when using the materials as designed. Materials do not approach reasoning as a generalized imperative, but instead create opportunities for students to reason *about* key mathematics detailed in the content standards for the grade. Materials thus attend first and most thoroughly to those places in the content standards setting explicit expectations for

¹⁶ Curriculum designers might consider how research on motivation and character development has value for designing tools that develop students’ perseverance and other mathematical practices. For more information, see, e.g., Dweck (2008), “Mindsets and Math” (<http://opportunityequation.org/teaching-and-leadership/mindsets-math-science-achievement/>); Duckworth et al. (2007), “Grit: Perseverance and Passion for Long-Term Goals” (http://www.sas.upenn.edu/~duckwort/images/publications/DuckworthPetersonMatthewsKelly_2007_PerseveranceandPassion.pdf); and <http://www.psychologicalscience.org/index.php/publications/observer/2013/april-13/true-grit.html>.

explaining, justifying, showing, or proving. Students are asked to critique given arguments, e.g., by explaining under what conditions, if any, a mathematical statement is valid. Materials develop students' capacity for mathematical reasoning in a grade-level appropriate way, with a reasonable progression of sophistication from early grades up through high school.¹⁷ Teachers and students using the materials as designed spend significant classroom time communicating reasoning (by constructing viable arguments and critiquing the arguments of others concerning key grade-level mathematics)—recognizing that learning mathematics also involves time spent working on applications and practicing procedures. Materials provide examples of student explanations and arguments (e.g., fictitious student characters might be portrayed).

b. **Engaging students in problem solving as a form of argument.** Materials attend thoroughly to those places in the content standards that explicitly set expectations for multi-step problems; multi-step problems are not scarce in the materials. Some or many of these problems require students to devise a strategy autonomously. Sometimes the goal is the final answer alone (cf. MP.1); sometimes the goal is to lay out the solution as a sequence of well justified steps. In the latter case, the solution to a problem takes the form of a cogent argument that can be verified and critiqued, instead of a jumble of disconnected steps with a scribbled answer indicated by drawing a circle around it (cf. MP.6). Problems and activities of this nature are grade-level appropriate, with a reasonable progression of sophistication from early grades up through high school.

c. **Explicitly attending to the specialized language of mathematics.** Mathematical reasoning involves specialized language. Therefore, materials and tools address the development of mathematical and academic language associated with the standards. The language of argument, problem solving and mathematical explanations are taught rather than assumed. Correspondences between language and multiple mathematical representations including diagrams, tables, graphs, and symbolic expressions are identified in material designed for language development. Note that variety in formats and types of representations—graphs, drawings, images, and tables in addition to text—can relieve some of the language demands that English language learners face when they have to show understanding in math.

The text is considerate of English language learners, helping them to access challenging mathematics and helping them to develop grade level language. For example, materials might include annotations to help with comprehension of words, sentences and paragraphs, and give examples of the use of words in other situations. Modifications to language do not sacrifice the mathematics, nor do they put off necessary language development.

¹⁷ As students progress through the grades, their production and comprehension of mathematical arguments evolves from informal and concrete toward more formal and abstract. In early grades students employ imprecise expressions which with practice over time become more precise and viable arguments in later grades. Indeed, the use of imprecise language is part of the process in learning how to make more precise arguments in mathematics. Ultimately, conversation about arguments helps students transform assumptions into explicit and precise claims.

A criterion for the mathematics and statistics in materials for science and technical subjects

Lack of alignment in these subjects could have the effect of compromising the focus and coherence of the mathematics Standards. Instead of reinforcing concepts and skills already carefully introduced in math class, teachers of science and technical subjects would have to teach this material in stopgap fashion. That wouldn't serve students well in any grade, and elementary teachers in particular would preside over a chaotic learning environment.

[S] Consistency with CCSSM: Materials for science and technical subjects are consistent with

CCSSM. Materials for these subjects in K–8 do not subtract from the focus and coherence of the Standards by outpacing CCSSM math progressions in grades K–8 or misaligning to them. In grades 6–8, materials for these subjects also build coherence across the curriculum and support college and career readiness by integrating key mathematics into the disciplines, particularly simple algebra in the physical sciences and technical subjects, and basic statistics in the life sciences and technical subjects (see Table 3 for a possible picture along these lines).

Table 3

Algebraic competencies integrated into materials for middle school science and technical subjects	Statistical competencies integrated into materials for middle school science and technical subjects
<ul style="list-style-type: none">• Working with positive and negative numbers (including fractions) to solve problems• Using variables and writing and solving equations to solve problems• Recognizing and using proportional relationships to solve problems• Graphing proportional relationships and linear functions to solve problems	<ul style="list-style-type: none">• Working with distributions and measures of center and variability• Working with simple probability and random sampling• Working with bivariate categorical data (e.g., two-way tables)• Working with bivariate measurement data (e.g., scatter plots) and linear models

Indicators of quality in instructional materials and tools for mathematics

The preceding criteria express important dimensions of alignment to the Standards. The following are some additional dimensions of quality that materials and tools should exhibit in order to give teachers and students the tools they need to meet the Standards:

- Problems in the materials are worth doing:
 - The underlying design of the materials distinguishes between *problems* and *exercises*. Whatever specific terms are used for these two types, in essence the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Problems are problems because students haven't yet learned how to solve them; students are learning from solving them. Materials use problems to teach mathematics. Lessons have a few well designed problems that progressively build and extend understanding. Practice exercises that build fluency are easy to recognize for their purpose. Other exercises require longer chains of reasoning.
 - Each problem or exercise has a purpose—whether to teach new knowledge, bring misconceptions to the surface, build skill or fluency, engage the student in one or several mathematical practices, or simply present the student with a fun puzzle.
 - Assignments aren't haphazardly designed. Exercises are given to students in intentional sequences—for example, a sequence leading from prior knowledge to new knowledge, or a sequence leading from concrete to abstract, or a sequence that leads students through a number of important cases, or a sequence that elicits new understanding by inviting students to see regularity in repeated reasoning. Lessons with too many problems make problems a commodity; they forbid concentration, and they make focus and coherence unlikely.
 - The language in which problems are posed is carefully considered. Note that mathematical problems posed using only ordinary language are a special genre of text that has conventions and structures needing to be learned. The language used to pose mathematical problems should evolve with the grade level and across mathematics content.
- There is variety in the pacing and grain size of content coverage.
 - Materials that devote roughly equal time to each content standard do not allow teachers and students to focus where necessary.
 - The Standards are not written at uniform grain size. Sometimes an individual content standard will require days of work, possibly spread over the entire year, while other standards could be sufficiently addressed when grouped with other standards and treated in a shorter time span.
- There is variety in what students produce: Students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments, explanations, diagrams, mathematical models, etc. In a way appropriate to the grade level, students are asked to answer questions or develop explanations about why a solution makes sense, how quantities are represented in expressions, and how elements of symbolic, diagrammatic, tabular, graphical and/or verbal representations correspond.

- Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates. Teachers are supported in extending student explanations and modeling explanations of new methods. Lesson structure frequently calls for students to find solutions, explain their reasoning, and ask and answer questions about their reasoning as it concerns problems, diagrams, mathematical models, etc. Over time there is a rhythm back and forth between making sense of concepts and exercising for proficiency.
- There are separate teacher materials that support and reward teacher study, including:
 - Discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit.
 - Discussion of student ways of thinking with respect to important mathematical problems and concepts—especially anticipating the variety of student responses.
 - Guidance on interaction with students, mostly questions to prompt ways of thinking.
 - Guidance on lesson flow.
 - Discussion of desired mathematical behaviors being elicited among the students.
- The use of manipulatives follows best practices (see, e.g., *Adding It Up*, 2001):
 - *Manipulatives are faithful representations of the mathematical objects they represent.* For example, colored chips can be helpful in representing some features of rational numbers, but they do not provide particularly direct representations of all of the important mathematics. The opposite of the opposite of red isn't clearly blue, for example, and chips aren't particularly well suited as models for adding rational numbers that are not integers (for this, a number line model may be more appropriate).
 - *Manipulatives are connected to written methods.* “Research indicates that students’ experiences using physical models to represent hundreds, tens, and ones can be effective if the materials help them think about how to combine quantities and, eventually, how these processes connect with written procedures.” (*Adding It Up*, p. 198, emphasis in the original). For example, base-ten blocks are a reasonable *model* for adding within 1000, but not a reasonable *method* for doing so; nor are colored chips a reasonable *method* for adding integers. (Cf. standards 1.NBT.4, 1.NBT.6, 2.NBT.7, and 5.NBT.7; these are not the only places in the curriculum where connecting to a written method is important). The word “fluently” in particular as used in the Standards refers to fluency with a written or mental method, not a method using manipulatives or concrete representations.
- Materials are carefully reviewed by qualified individuals, whose names are listed, in an effort to ensure:
 - Freedom from mathematical errors¹⁸
 - Grade-level appropriateness

¹⁸ Sometimes errors in materials are simple falsehoods, e.g., printing an incorrect answer to a problem. Other errors are more subtle, e.g., asking students to explain why something is so when it has been defined to be so.

- Freedom from bias (for example, problem contexts that use culture-specific background knowledge do not assume readers from all cultures have that knowledge; simple explanations or illustrations or hints scaffold comprehension).
- Freedom from unnecessary language complexity.
- The visual design isn't distracting or chaotic, or aimed at adult purchasers, but instead serves only to support young students in engaging thoughtfully with the subject.
- Support for English language learners is thoughtful and helps those learners to meet the same standards as all other students. Allowing English language learners to collaborate as they strive to learn and show understanding in an environment where English is used as the medium of instruction will give them the support they need to meet their academic goals. Materials can structure interactions in pairs, in small groups, and in the large group (or in any other group configuration), as some English language learners might be shy to share orally with the large group, but might not have problem sharing orally with a small group or in pairs. (In addition, when working in pairs, if ELLs are paired up with a student who shares the same language, they might choose to think about and discuss the problems in their first language, and then worry about doing it in English.)

Appendix

The Structure is the Standards

*Essay by Phil Daro, William McCallum, and Jason Zimba, February 16, 2012*¹⁹

You have just purchased an expensive Grecian urn and asked the dealer to ship it to your house. He picks up a hammer, shatters it into pieces, and explains that he will send one piece a day in an envelope for the next year. You object; he says “don’t worry, I’ll make sure that you get every single piece, and the markings are clear, so you’ll be able to glue them all back together. I’ve got it covered.” Absurd, no? But this is the way many school systems require teachers to deliver mathematics to their students; one piece (i.e. one standard) at a time. They promise their customers (the taxpayers) that by the end of the year they will have “covered” the standards.

In the Common Core State Standards, individual statements of what students are expected to understand and be able to do are embedded within domain headings and cluster headings designed to convey the structure of the subject. “The Standards” refers to all elements of the design—the wording of domain headings, cluster headings, and individual statements; the text of the grade level introductions and high school category descriptions; the placement of the standards for mathematical practice at each grade level.

The pieces are designed to fit together, and the standards document fits them together, presenting a coherent whole where the connections within grades and the flows of ideas across grades are as visible as the story depicted on the urn.

The analogy with the urn only goes so far; the Standards are a policy document, after all, not a work of art. In common with the urn, however, the Standards were crafted to reward study on multiple levels: from close inspection of details, to a coherent grasp of the whole. Specific phrases in specific standards are worth study and can carry important meaning; yet this meaning is also importantly shaped by the cluster heading in which the standard is found. At higher levels, domain headings give structure to the subject matter of the discipline, and the practices’ yearly refrain communicates the varieties of expertise which study of the discipline develops in an educated person.

Fragmenting the Standards into individual standards, or individual bits of standards, erases all these relationships and produces a sum of parts that is decidedly less than the whole. Arranging the Standards into new categories also breaks their structure. It constitutes a remixing of the Standards. There is meaning in the cluster headings and domain names that is not contained in the numbered statements beneath them. Remove or reword those headings and you have changed the meaning of the Standards; you now have different Standards; you have not adopted the Common Core.

Sometimes a remix is as good as or better than the original. Maybe there are 50 remixes, adapted to the preferences of each individual state (although we doubt there are 50 good ones). Be that as it may, a remix of a work is not the same as the original work, and with 50 remixes we would not have common standards; we would have the same situation we had before the Common Core.

Why is paying attention to the structure important? Here is why: The single most important flaw in United States mathematics instruction is that the curriculum is “a mile wide and an inch deep.” This finding comes from research comparing the U.S. curriculum to high performing countries, surveys of

¹⁹ <http://commoncoretools.me/2012/02/16/the-structure-is-the-standards/>.

college faculty and teachers, the National Math Panel, the Early Childhood Learning Report, and all the testimony the CCSS writers heard. The standards are meant to be a blueprint for math instruction that is more focused and coherent. The focus and coherence in this blueprint is largely in the way the standards progress from each other, coordinate with each other and most importantly cluster together into coherent bodies of knowledge. Crosswalks and alignments and pacing plans and such cannot be allowed to throw away the focus and coherence and regress to the mile-wide curriculum.

Another consequence of fragmenting the Standards is that it obscures the progressions in the standards. The standards were not so much assembled out of topics as woven out of progressions. Maintaining these progressions in the implementation of the standards will be important for helping all students learn mathematics at a higher level. Standards are a bit like the growth chart in a doctor's office: they provide a reference point, but no child follows the chart exactly. By the same token, standards provide a chart against which to measure growth in children's knowledge. Just as the growth chart moves ever upward, so standards are written as though students learned 100% of prior standards. In fact, all classrooms exhibit a wide variety of prior learning each day. For example, the properties of operations, learned first for simple whole numbers, then in later grades extended to fractions, play a central role in understanding operations with negative numbers, expressions with letters and later still the study of polynomials. As the application of the properties is extended over the grades, an understanding of how the properties of operations work together should deepen and develop into one of the most fundamental insights into algebra. The natural distribution of prior knowledge in classrooms should not prompt abandoning instruction in grade level content, but should prompt explicit attention to connecting grade level content to content from prior learning. To do this, instruction should reflect the progressions on which the CCSSM are built. For example, the development of fluency with division using the standard algorithm in grade 6 is the occasion to surface and deal with unfinished learning with respect to place value. Much unfinished learning from earlier grades can be managed best inside grade level work when the progressions are used to understand student thinking.

This is a basic condition of teaching and should not be ignored in the name of standards. Nearly every student has more to learn about the mathematics referenced by standards from earlier grades. Indeed, it is the nature of mathematics that much new learning is about extending knowledge from prior learning to new situations. For this reason, teachers need to understand the progressions in the standards so they can see where individual students and groups of students are coming from, and where they are heading. But progressions disappear when standards are torn out of context and taught as isolated events.

Appendix: The Publishers' Criteria for the Common Core State Standards

Mathematics, High School



High School Publishers' Criteria for the Common Core State Standards for Mathematics

These Standards are not intended to be new names for old ways of doing business. They are a call to take the next step. ... It is time to recognize that standards are not just promises to our children, but promises we intend to keep.

—CCSSM, p. 5

The Common Core State Standards were developed through a bipartisan, state-led initiative spearheaded by state superintendents and state governors. The Standards reflect the collective expertise of hundreds of teachers, education researchers, mathematicians, and state content experts from across the country. The Standards build on the best of previous state standards plus a large body of evidence from international comparisons and domestic reports and recommendations to define a sturdy staircase to college and career readiness. Most states have now adopted the Standards to replace previous expectations in English language arts/literacy and mathematics.

Standards by themselves cannot raise achievement. Standards don't stay up late at night working on lesson plans, or stay after school making sure every student learns—it's teachers who do that. And standards don't implement themselves. Education leaders from the state board to the building principal must make the Standards a reality in schools. Publishers too have a crucial role to play in providing the tools that teachers and students need to meet higher standards. This document, developed by the CCSSM writing team with review and collaboration from partner organizations, individual experts, and districts using the K-8 criteria, aims to support faithful CCSSM implementation by providing criteria for materials aligned to the Common Core State Standards for Mathematics. States, districts, and publishers can use these criteria to develop, evaluate, or purchase aligned materials, or to supplement or modify existing materials to remedy weaknesses. Note that an update to this document is planned for Fall 2013.

How should alignment be judged? Traditionally, judging alignment has been approached as a crosswalking exercise. But crosswalking can result in large percentages of "aligned content" while obscuring the fact that the materials in question align not at all to the letter or the spirit of the standards being implemented. These criteria are an attempt to sharpen the alignment question and make alignment and misalignment more clearly visible.

These criteria were developed from the perspective that publishers and purchasers are equally responsible for fixing the materials market. Publishers cannot deliver focus to buyers who only ever complain about what has been left out, yet never complain about what has crept in. More generally, publishers cannot invest in quality if the market doesn't demand it of them nor reward them for producing it.

The High School Publishers' Criteria are structured as follows:

- I. Focus, Coherence, and Rigor in the High School Standards
- II. Criteria for Materials and Tools Aligned to the High School Standards
- III. Appendix: "Lasting Achievements in K–8"

I. Focus, Coherence, and Rigor in the High School Standards

This finding that postsecondary instructors target fewer skills as being of high importance is consistent with recent policy statements and findings raising concerns that some states require too many standards to be taught and measured, rather than focusing on the most important state standards for students to attain. ...

Because the postsecondary survey results indicate that a more rigorous treatment of fundamental content knowledge and skills needed for credit-bearing college courses would better prepare students for postsecondary school and work, states would likely benefit from examining their state standards and, where necessary, reducing them to focus only on the knowledge and skills that research shows are essential to college and career readiness and postsecondary success. ...

—ACT *National Curriculum Survey 2009*

...[B]ecause conventional textbook coverage is so fractured, unfocused, superficial, and unprioritized, there is no guarantee that most students will come out knowing the essential concepts of algebra.

—Wiggins, 2012¹

For years national reports have called for greater focus in U.S. mathematics education. TIMSS and other international studies have concluded that mathematics education in the United States is a mile wide and an inch deep. A mile-wide inch-deep curriculum translates to less time per topic. Less time means less depth and moving on without many students. In high-performing countries, strong foundations are laid and then further knowledge is built on them; the design principle in those countries is focus with coherent progressions. The U.S. has lacked such discipline and patience.

There is evidence that state standards have become somewhat more focused over the past decade. But in the absence of standards shared across states, instructional materials have not followed suit. Moreover, prior to the Common Core, state standards were making little progress in terms of coherence: states were not fueling achievement by organizing math so that the subject makes sense.

With the advent of the Common Core, a decade’s worth of recommendations for greater focus and coherence finally have a chance to bear fruit. Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics.² These principles are meant to fuel greater achievement in a deep and rigorous curriculum, one in which students acquire conceptual understanding, procedural skill and fluency, and the ability to apply mathematics to solve problems and formulate mathematical models. Thus, the implications of the standards for mathematics education could be summarized briefly as follows:

¹ From <http://grantwiggins.wordpress.com/2012/02/01/a-postscript-to-my-comment-about-kids-having-trouble-with-the-distributive-property/>.

² For some of the sources of evidence consulted during the standards development process, see pp. 91–93 of CCSSM.

Focus: focus strongly where the standards focus

Coherence: think across grades/courses, and link to major topics in each course

Rigor: in major topics, pursue with equal intensity

- conceptual understanding,
- procedural skill and fluency, and
- applications

Focus

Focus in high school is important in order to prepare students for college and careers. National surveys have repeatedly concluded that postsecondary instructors value greater mastery of a smaller set of prerequisites over shallow exposure to a wide array of topics, so that students can build on what they know and apply what they know to solve substantial problems. A college-ready curriculum including all of the standards without a (+) symbol in High School should devote the majority of students' time to building the particular knowledge and skills that are most important as prerequisites for a wide range of college majors, postsecondary programs, and careers.

Coherence

Coherence is about making math make sense. Mathematics is not a list of disconnected tricks or mnemonics. It is an elegant subject in which powerful knowledge results from reasoning with a small number of principles.³ A special character of the mile-wide inch-deep problem in high school is that there are often too many separately memorized techniques, with no overall structure to tie them altogether. Taking advantage of coherence can reduce clutter in the curriculum. For example, if students can see that the distance formula and the trigonometric identity $\sin^2(t) + \cos^2(t) = 1$ are both manifestations of the Pythagorean theorem, they have an understanding that helps them reconstruct these formulas and not just memorize them temporarily. In order to help teachers and curriculum developers see coherence, the High School content standards in the Algebra and Function categories are arranged under headings like “Seeing Structure in Expressions” and Building Functions.”

“Fragmenting the Standards into individual standards, or individual bits of standards ... produces a sum of parts that is decidedly less than the whole” (Appendix from the K-8 Publishers’ Criteria). Breaking down standards poses a threat to the focus and coherence of the Standards. It is sometimes helpful or necessary to isolate a part of a compound standard for instruction or assessment, but not always, and not at the expense of the Standards as a whole. A drive to break the Standards down into ‘microstandards’ risks making the checklist mentality even worse than it is today. Microstandards would also make it easier for microtasks and microlessons to drive out extended tasks and deep learning. Finally, microstandards could allow for micromanagement: Picture teachers and students

³ For some remarks by Phil Daro on this theme, see the excerpt at <http://vimeo.com/achievethecore/darofocus>, and/or the full video available at <http://commoncoretools.me/2012/05/21/phil-daro-on-learning-mathematics-through-problem-solving/>.

being held accountable for ever more discrete performances. If it is bad today when principals force teachers to write the standard of the day on the board, think of how it would be if every single standard turns into three, six, or a dozen or more microstandards. If the Standards are like a tree, then microstandards are like twigs. You can't build a tree out of twigs, but you can use twigs as kindling to burn down a tree.

Rigor

To help students meet the expectations of the Standards, educators will need to pursue, with equal intensity, three aspects of rigor: (1) conceptual understanding, (2) procedural skill and fluency, and (3) applications. The word “rigor” isn’t a code word for just one of these three; rather, it means equal intensity in all three. The word “understand” is used in the Standards to set explicit expectations for conceptual understanding, and the phrase “real-world problems” and the star symbol (★) are used to set expectations and flag opportunities for applications and modeling. (Modeling is a Standard for Mathematical Practice as well as a content category in High School.) The High School content standards do not set explicit expectations for fluency, but fluency is important in high school mathematics.

The Standards for Mathematical Practice set expectations for using mathematical language and representations to reason, solve problems, and model. These expectations are related to fluency: precision in the use of language, seeing structure in expressions, and reasoning from the concrete to the abstract correspond to high orders of fluency in the acquisition of mathematical language, especially in the form of symbolic expressions and graphs. High School mathematics builds new and more sophisticated fluencies on top of the earlier fluencies from K-8 that centered on numerical calculation.

To date, curricula have not always been balanced in their approach to these three aspects of rigor. Some curricula stress fluency in computation without acknowledging the role of conceptual understanding in attaining fluency and making algorithms more learnable. Some stress conceptual understanding without acknowledging that fluency requires separate classroom work of a different nature. Some stress pure mathematics without acknowledging that applications can be highly motivating for students and that a mathematical education should make students fit for more than just their next mathematics course. At another extreme, some curricula focus on applications, without acknowledging that math doesn’t teach itself.

The Standards do not take sides in these ways, but rather they set high expectations for all three components of rigor in the major work of each grade. Of course, that makes it necessary that we focus—otherwise we are asking teachers and students to do more with less.

II. Criteria for Materials and Tools Aligned to the High School Standards

Students deserve pathways to college designed as preparation, not as obstacle courses....

—Daro, in the 2008 IAS-Carnegie Commission Report

Using the criteria

One approach to developing a document such as this one would have been to develop a separate criterion for each mathematical topic approached in deeper ways in the Standards, a separate criterion for each of the Standards for Mathematical Practice, etc. It is indeed necessary for textbooks to align to the Standards in detailed ways. However, enumerating those details here would have led to a very large number of criteria. Instead, the criteria use the Standards’ focus, coherence, and rigor as the main themes. In addition, this document includes a section on indicators of quality in materials and tools, as well as a criterion for the mathematics and statistics in instructional resources for science and technical subjects. Note that the criteria apply to materials and tools, not to teachers or teaching.

The criteria can be used in several ways:

- *Informing purchases and adoptions.* Schools or districts evaluating materials and tools for purchase can use the criteria to test claims of alignment. States reviewing materials and tools for adoption can incorporate these criteria into their rubrics.
- *Working with previously purchased materials.* Most existing materials and tools likely fail to meet one or more of these criteria, even in cases where alignment to the Standards is claimed. But the pattern of failure is likely to be informative. States and districts need not wait for “the perfect book” to arrive, but can use the criteria now to carry out a thoughtful plan to modify or combine existing resources in such a way that students’ actual learning experiences approach the focus, coherence, and rigor of the Standards. Publishers can develop innovative materials and tools specifically aimed at addressing identified weaknesses of widespread textbooks or programs.
- *Guiding the development of materials.* Publishers currently modifying their programs and designers of new materials and tools can use the criteria to shape these projects.
- *Professional development.* The criteria can be used to support activities that help communicate the shifts in the Standards. For example, teachers can analyze existing materials to reveal how they treat the major work of the grade, or assess how well materials attend to the three aspects of rigor, or determine which problems are key to developing the ideas and skills of the grade.

In all these cases, it is recommended that the criteria for focus be attended to first. By attending first to focus, coherence and rigor may realistically develop.

The Standards do not dictate the acceptable forms of instructional resources—to the contrary, they are a historic opportunity to raise student achievement through innovation. Materials and tools of very different forms can meet the criteria, including workbooks, multi-year programs, and targeted interventions. For example, materials and tools that treat a single important topic or domain might be valuable to consider.

Alignment for digital and online materials and tools. Digital materials offer substantial promise for conveying mathematics in new and vivid ways and customizing learning. In a digital or online format, diving deeper and reaching back and forth across the grades is easy and often useful. That can enhance focus and coherence. But if such capabilities are poorly designed, focus and coherence could also be diminished. In a setting of dynamic content navigation, the navigation experience must preserve the coherence of Standards clusters and progressions while allowing flexibility and user control: Users can readily see where they are with respect to the structure of the curriculum and its basis in the Standards’ domains, clusters and standards.

Digital materials that are smaller than a course can be useful. The smallest granularity for which they can be properly evaluated is a cluster of standards. These criteria can be adapted for clusters of standards or progressions within a cluster, but might not make sense for isolated standards.

Special populations. As noted in the Standards (p. 4),

All students must have the opportunity to learn and meet the same high standards if they are to access the knowledge and skills necessary in their post-school lives. The Standards should be read as allowing for the widest possible range of students to participate fully from the outset, along with appropriate accommodations to ensure maximum participation of students with special education needs.

Thus, **an over-arching criterion** for materials and tools is that they provide supports for special populations such as students with disabilities, English language learners,⁴ and gifted students. Designers of materials should consult accepted guidelines for providing these supports.

*

For the sake of brevity, the criteria sometimes refer to parts of the Standards using abbreviations such as A.REI.10 (an individual content standard), MP.8 (a practice standard), F.BF.A (a cluster heading), or N.RN (a domain heading). Readers of the document should have a copy of the Standards available in order to refer to the indicated text in each case.

A note about high school courses: The High School Standards do not mandate the sequence or organization of high school courses. However, curriculum materials and tools based on a course sequence should ensure that the sequence of the courses does not break apart the coherence of the mathematics while meeting focus and rigor as well.

⁴ Slides from a brief and informal presentation by Phil Daro about mathematical language and English language learners can be found at <http://db.tt/VARV3eEJ>.

Criteria for Materials and Tools Aligned to the Standards

1. **Focus on Widely Applicable Prerequisites:** In any single course, students using the materials as designed spend the majority of their time developing knowledge and skills that are widely applicable as prerequisites for postsecondary education. Comprehensive materials coherently include all of the standards in High School without a (+) symbol, with a majority of the time devoted to building the particular knowledge and skills that are most *applicable and prerequisite* to a wide range of college majors and postsecondary programs. Materials developed to prepare students for STEM majors ensure that STEM-intending students learn all of the prerequisites in the Standards necessary for calculus and other advanced courses.

Table 1 lists clusters and standards with relatively wide applicability across a range of postsecondary work. Table 1 is a **subset** of the material students must study to be college and career ready (CCSSM, pp. 57, 84). But to meet this criterion, materials must give especially careful treatment to the domains, clusters, and standards in Table 1, including their interconnections and their applications—amounting to a majority of students’ time.

This criterion also applies to digital or online materials without fixed pacing plans. Such tools are explicitly designed for focus, so that students spend the majority of their time on widely applicable work.

Table 1. Content From CCSSM Widely Applicable as Prerequisites for a Range of College Majors, Postsecondary Programs and Careers*

Number and Quantity	Algebra	Functions	Geometry	Statistics and Probability	Applying Key Takeaways from Grades 6–8**
<p>N-RN, Real Numbers: Both clusters in this domain contain widely applicable prerequisites.</p> <p>N-Q*, Quantities: Every standard in this domain is a widely applicable prerequisite. Note, this domain is especially important in the high school content standards overall as a widely applicable prerequisite.</p>	<p>Every domain in this category contains widely applicable prerequisites.^o</p> <p>Note, the A-SSE domain is especially important in the high school content standards overall as a widely applicable prerequisite.</p>	<p>F-IF, Interpreting Functions: Every cluster in this domain contains widely applicable prerequisites.^o</p> <p>Additionally, standards F-BF.1 and F-LE.1 are relatively important within this category as widely applicable prerequisites.</p>	<p>The following standards and clusters are relatively important within this category as widely applicable prerequisites:</p> <p>G-CO.1 G-CO.9 G-CO.10 G-SRT.B G-SRT.C</p> <p>Note, the above standards in turn have learning prerequisites within the Geometry category, including:</p> <p>G-CO.A G-CO.B G-SRT.A</p>	<p>The following standards are relatively important within this category as widely applicable prerequisites:</p> <p>S-ID.2 S-ID.7 S-IC.1</p> <p>Note, the above standards in turn have learning prerequisites within 6-8.SP.</p>	<p>Solving problems at a level of sophistication appropriate to high school by:</p> <ul style="list-style-type: none"> • Applying ratios and proportional relationships. • Applying percentages and unit conversions, e.g., in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m³, acre-feet, etc.). • Applying basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem. • Applying concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic. • Applying concepts and skills of basic statistics and probability (see 6-8.SP). • Performing rational number arithmetic fluently.

A note about the codes: Letter codes (A, B, C) are used to denote cluster headings. For example, G-SRT.B refers to the *second* cluster heading in the domain G-SRT, “Prove theorems using similarity” (pp. 77 of CCSSM).

* Informed by postsecondary survey data in Conley *et al.* (2011), “Reaching the Goal: The Applicability and Importance of the Common Core State Standards to College and Career Readiness,” <http://www.epiconline.org/publications/documents/ReachingtheGoal-FullReport.pdf>.

** See CCSSM, p. 84: “...some of the highest priority content for college and career readiness comes from Grades 6-8. This body of material includes powerfully useful proficiencies such as applying ratio reasoning in real-world and mathematical problems, computing fluently with positive and negative fractions and decimals, and solving real-world and mathematical problems involving angle measure, area, surface area, and volume.”

* Modeling star (present in CCSSM)

^o Only the standards without a (+) sign are being cited here.

2. **Rigor and Balance:** Materials and tools reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by (all of the following, in the case of comprehensive materials; at least one of the following for supplemental or targeted resources):
- Developing students' conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.** Materials amply feature high-quality conceptual problems and questions. This includes brief conceptual problems with low computational difficulty (e.g., 'What is the maximum value of the function $f(t) = 5 - t^2$?'); brief conceptual questions (e.g., 'Is $\sqrt{2}$ a polynomial? How about $\frac{1}{2}(x + \sqrt{2}) + \frac{1}{2}(-x + \sqrt{2})$?'); and problems that involve identifying correspondences across different mathematical representations of quantitative relationships.⁵ Classroom discussion about such problems can offer opportunities to engage in mathematical practices such as constructing and critiquing arguments (MP.3). In the materials, conceptual understanding is attended to most thoroughly in those places in the content standards where explicit expectations are set for understanding or interpreting. Such problems and activities center on fine-grained mathematical concepts, such as the correspondence between an equation and its graph, solving equations as a process of answering a question, analyzing a nonlinear equation $f(x) = g(x)$ by graphing f and g on a single set of axes, etc. Conceptual understanding of key mathematical concepts is thus distinct from applications or fluency work, and these three aspects of rigor must be balanced as indicated in the Standards.

- Giving attention throughout the year to procedural skill and fluency.** In higher grades, algebra is the language of much of mathematics. Like learning any language, we learn by using it. Sufficient practice with algebraic operations is provided so as to make realistic the attainment of the Standards as a whole; for example, fluency in algebra can help students get past the need to manage computational details so that they can observe structure (MP.7) and express regularity in repeated reasoning (MP.8).⁶ Progress toward procedural skill and fluency is interwoven with students' developing conceptual understanding of the operations in question. Manipulatives and concrete representations are connected to the written and symbolic methods to which they refer. As well, purely procedural problems and exercises are present. These include cases in which opportunistic strategies are valuable, as in solving $(3x - 2)^2 = 6x - 4$, as well as an ample number of generic cases so that students can learn and practice efficient and general methods (e.g., solving $c + 8 - c^2 = 3(c - 1)^2 - 5$). Methods and algorithms are general and based on principles of mathematics, not mnemonics or tricks.

⁵ Note that for ELL students, multiple representations also serve as multiple access paths.

⁶ See the PARCC Model Content Frameworks for Mathematics for additional examples of specific fluency recommendations: <http://www.parcconline.org/mcf/mathematics/parcc-model-content-frameworks-browser>.

c. **Allowing teachers and students using the materials as designed to spend sufficient time working with engaging applications/modeling.** Materials include an ample number of contextual problems that develop the mathematics of the course, afford opportunities for practice, and engage students in problem solving. Materials also include problems in which students must make their own assumptions or simplifications in order to model a situation mathematically. Applications take the form of problems to be worked on individually as well as classroom activities centered on application scenarios. Materials attend thoroughly to those places in the content standards where expectations for multi-step and real-world problems are explicit. Students learn to use the content knowledge and skills specified in the content standards in applications, with particular stress on applying widely applicable work. Problems and activities show a sensible tradeoff between the sophistication of the problem and the difficulty or newness of the content knowledge the student is expected to bring to bear.

Note that modeling is a mathematical practice in every grade, but in high school it is also a content category (CCSSM, pp. 72, 73); therefore, modeling is prominent and enhanced in high school materials, with more elements of the modeling cycle present (CCSSM, p. 72). Finally, materials include an ample number of high-school-level problems that involve applying key takeaways from grades K–8; see Table 1.⁷ For example, a problem in which students use reference data to determine the energy cost of different fuels might draw on proportional relationships, unit conversion, and other skills that were first introduced in the middle grades, yet still be a high-school level problem because of the strategic competence required.⁸

Additional aspects of the Rigor and Balance Criterion :

- (1) *The three aspects of rigor are not always separate in materials.* (Conceptual understanding and fluency go hand in hand; fluency can be practiced in the context of applications; and brief applications can build conceptual understanding.)
- (2) *Nor are the three aspects of rigor always together in materials.* (Fluency requires dedicated practice to that end. Rich applications cannot always be shoehorned into the mathematical topic of the day. And conceptual understanding will not always come along for free unless explicitly taught.)
- (3) Digital and online materials with no fixed lesson flow or pacing plan are not designed for superficial browsing but rather should be designed to instantiate the Rigor and Balance criterion.

⁷ From CCSSM, p. 84: “The evidence concerning college and career readiness shows clearly that the knowledge, skills, and practices important for readiness include a great deal of mathematics prior to the boundary defined by (+) symbols in these standards. Indeed, some of the highest priority content for college and career readiness comes from Grades 6–8. This body of material includes powerfully useful proficiencies such as applying ratio reasoning in real-world and mathematical problems, computing fluently with positive and negative fractions and decimals, and solving real-world and mathematical problems involving angle measure, area, surface area, and volume.”

⁸ For more on the role that skills first introduced in the middle grades continue to play in high school and beyond, see Appendix, “Lasting Achievements in K–8.”

3. **Consistent Content: Materials are consistent with the content in the Standards, by (all of the following):**
- a. **Basing courses on the content specified in the Standards.** Content in materials matches well with the mathematics specified in the Standards for Mathematical Content. (This does not require the table of contents in a book to be a replica of the content standards.) Any discrepancies in high school content enhance the required learning and are clearly aimed at helping students meet the Standards as written, rather than setting up competing requirements or effectively rewriting the standards. Comprehensive materials do not introduce gaps in learning by omitting any content without a (+) symbol that is specified in the Standards.
 - Digital and online materials that allow students and/or teachers to navigate content across course levels promote coherence by tracking the structure in the Standards. For example, such materials might link problems and concepts so that teachers and students can browse a cluster.
 - b. **Giving all students extensive work with course-level problems.** Previous-grades review and previous-course review is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year. The basic model for course-to-course progression involves students making tangible progress during each given course, as opposed to substantially reviewing then marginally extending from previous grades. Differentiation is sometimes necessary, but materials often manage unfinished learning from earlier grades and courses inside course-level work, rather than setting aside course-level work to reteach earlier content. Unfinished learning from earlier grades and courses is normal and prevalent; it should not be ignored nor used as an excuse for cancelling course level work and retreating to below-level work. (For example, the equation of a circle is an occasion to surface and deal with unfinished learning about the correspondence between equations and their graphs.) Likewise, students who are “ready for more” can be provided with problems that take course-level work in deeper directions, not just exposed to later courses’ topics.
 - c. **Relating course level concepts explicitly to prior knowledge from earlier grades and courses.** The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge. Course-level problems in the materials often involve application of knowledge learned in earlier grades and courses. Although students may well have learned this earlier content, they have not learned how it extends to new mathematical situations and applications. They learn basic ideas of functions, for example, and then extend them to deal explicitly with domains. They learn about expressions as recording calculations with numbers, and then extend them to symbolic objects in their own right. The materials make these extensions of prior knowledge explicit. Thus, materials routinely integrate new knowledge with knowledge from earlier grades.

4. **Coherent Connections: Materials foster coherence through connections in a single course, where appropriate and where required by the Standards, by (all of the following):**
 - a. **Including learning objectives that are visibly shaped by CCSSM cluster and domain headings.** Cluster headings and domain headings in the High School standards function like topic sentences in a paragraph in that they state the point of, and lend additional meaning to, the individual content standards that follow. Cluster or domain headings in High School also sometimes signal important content-practice connections, e.g., “Seeing Structure in Expressions” connects expressions to MP.7 and “Reasoning with Equations and Inequalities” connects solving to MP.3. Hence an important criterion for coherence is that some or many of the learning objectives in the materials are visibly shaped by CCSSM cluster or domain headings. Materials do not simply treat the Standards as a sum of individual content standards and individual practice standards.
 - b. **Including problems and activities that serve to connect two or more clusters in a domain, two or more domains in a category, or two or more categories, in cases where these connections are natural and important.** If instruction only operates at the individual standard level, or even at the individual cluster level, then some important connections will be missed. For example, creating equations (see A-CED) isn’t very valuable in itself unless students can also solve them (see A-REI). Materials do not invent connections not explicit in the standards without first attending thoroughly to the connections that are required explicitly in the Standards (e.g., A-REI.11 connects functions to equations in a graphical context.) Not everything in the standards is naturally well connected or needs to be connected (e.g., systems of linear equations aren’t well thought of in relation to functions, and connecting these two things is incoherent). Instead, connections in materials are mathematically natural and important (e.g., work with quadratic functions and work with quadratic equations), reflecting plausible direct implications of what is written in the Standards without creating additional requirements.
 - c. **Preserving the focus, coherence, and rigor of the Standards even when targeting specific objectives.** Sometimes a content standard is a compound statement, such as ‘Do X and do Y.’ More intricate compound forms also exist. (For example, see 3.OA.8.) It is sometimes helpful or necessary to isolate a part of a compound standard, but not always, and not at the expense of the Standards as a whole. Digital or print materials or tools are not aligned if they break down the Standards in such a way as to detract from focus, coherence, or rigor. This criterion applies to student-facing and teacher-facing materials, as well as to architectural documents or digital platforms that are meant to guide the development of student-facing or teacher-facing materials.
5. **Practice-Content Connections: Materials meaningfully connect content standards and practice standards.** “Designers of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction.” (CCSSM, p. 8.) Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of activities or problems that stimulate students to develop the habits of mind described in the practice standards. These practices are well-grounded in the content standards.

The practice standards are not just processes with ephemeral products (such as conversations). They also specify a set of products students are supposed to learn how to produce. Thus, students are asked to produce answers and solutions but also, in a course-appropriate way, arguments, explanations, diagrams, mathematical models, etc.

Materials are accompanied by an analysis, aimed at evaluators, of how the authors have approached each practice standard in relation to content within each applicable course and provide suggestions for delivering content in ways that help students meet the practice standards in course-appropriate ways. Materials tailor the connections to the content of the grade and to course-level-appropriate student thinking. Materials also include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.

6. **Focus and Coherence via Practice Standards: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.** Content and practice standards are not connected mechanistically or randomly, but instead support focus and coherence. Examples: Materials connect looking for and making use of structure (MP.7) with structural themes emphasized in the standards, such as purposefully transforming expressions, linking the structure of an expression to a feature of the its context, grasping the behavior of a function defined by an expression, etc.; materials use looking for and expressing regularity in repeated reasoning (MP.8) to shed light on algebra and functions, e.g., by summarizing repeated numerical examples in the form of equations or in the form of recursive expressions that define functions. These and other practices can support focus—for example, by moving students from repeated reasoning with the slope formula to writing equations for straight lines in various forms, rather than relying on memorizing all those forms in isolation.

7. **Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.** For example, MP.1 does not say, “Solve problems.” Or “Make sense of problems.” Or “Make sense of problems and solve them.” It says “Make sense of problems and persevere in solving them.” Thus, students using the materials as designed build their perseverance in course-appropriate ways by occasionally solving problems that require them to persevere to a solution beyond the point when they would like to give up.⁹ MP.5 does not say, “Use tools.” Or “Use appropriate tools.” It says “Use appropriate tools strategically.” Thus, materials include problems that reward students' strategic decisions about how to use tools, or about whether to use them at all. MP.8 does not say, “Extend patterns.” Or “Engage in repetitive reasoning.” It says “Look for and express regularity in repeated reasoning.” Thus, it is not enough for students to extend patterns or perform repeated calculations. Those repeated calculations must lead to an insight (e.g., “When I substitute $x - k$ for x in a function $f(x)$, where k is any

⁹ Curriculum designers might consider how research on motivation and character development has value for designing tools that develop students' perseverance and other mathematical practices. For more information, see, e.g., Dweck (2008), “Mindsets and Math” (<http://opportunityequation.org/teaching-and-leadership/mindsets-math-science-achievement/>); Duckworth et al. (2007), “Grit: Perseverance and Passion for Long-Term Goals” (http://www.sas.upenn.edu/~duckwort/images/publications/DuckworthPetersonMatthewsKelly_2007_PerseveranceandPassion.pdf); and <http://www.psychologicalscience.org/index.php/publications/observer/2013/april-13/true-grit.html>.

constant, the graph of the function shifts k units to the right.”). The analysis for evaluators explains how the full meaning of each practice standard has been attended to in the materials.

8. **Emphasis on Mathematical Reasoning: Materials support the Standards’ emphasis on mathematical reasoning, by (all of the following):**

- a. **Prompting students to construct viable arguments and critique the arguments of others concerning key course-level mathematics that is detailed in the content standards (cf. MP.3).** Materials provide sufficient opportunities for students to reason mathematically and express reasoning through classroom discussion, written work and independent thinking. Reasoning is not confined to optional or avoidable sections of the materials but is inevitable when using the materials as designed. Materials do not approach reasoning as a generalized imperative, but instead create opportunities for students to reason *about* key mathematics detailed in the content standards. Materials thus attend first and most thoroughly to those places in the content standards setting explicit expectations for explaining, justifying, showing, or proving. Students are asked to critique given arguments, e.g., by explaining under what conditions, if any, a mathematical statement is valid.¹⁰ Teachers and students using the materials as designed spend significant classroom time communicating reasoning (by constructing viable arguments and critiquing the arguments of others concerning key grade-level mathematics)—recognizing that learning mathematics also involves time spent working on applications and practicing procedures. Materials provide examples of student explanations and arguments (e.g., fictitious student characters might be portrayed). Materials follow accepted norms of mathematical reasoning, such as distinguishing between definitions and theorems, not asking students to explain why something is true when it has been defined to be so, etc.

- b. **Engaging students in problem solving as a form of argument.** Materials attend thoroughly to those places in the content standards that explicitly set expectations for multi-step problems; multi-step problems are not scarce in the materials. Some or many of these problems require students to devise a strategy autonomously. Sometimes the goal is the final answer alone (cf. MP.1); sometimes the goal is to lay out the solution as a sequence of well justified steps. In the latter case, the solution to a problem takes the form of a cogent argument that can be verified and critiqued, instead of a jumble of disconnected steps with a scribbled answer indicated by drawing a circle around it (cf. MP.6).
- c. **Explicitly attending to the specialized language of mathematics.** Mathematical reasoning involves specialized language. Therefore, materials and tools address the development of mathematical and academic language associated with the standards. The language of argument, problem solving and mathematical explanations are taught rather than assumed. Correspondences between language and multiple mathematical representations including

¹⁰ As students progress through the grades, their production and comprehension of mathematical arguments evolves from informal and concrete toward more formal and abstract. In early grades students employ imprecise expressions which with practice over time become more precise and viable arguments in later grades. Indeed, the use of imprecise language is part of the process in learning how to make more precise arguments in mathematics. Ultimately, conversation about arguments helps students transform assumptions into explicit and precise claims.

diagrams, tables, graphs, and symbolic expressions are identified in material designed for language development. Note that variety in formats and types of representations—graphs, drawings, images, and tables in addition to text—can relieve some of the language demands that English language learners face when they have to show understanding in math.

The text is considerate of English language learners, helping them to access challenging mathematics and helping them to develop grade level language. For example, materials might include annotations to help with comprehension of words, sentences and paragraphs, and give examples of the use of words in other situations. Modifications to language do not sacrifice the mathematics, nor do they put off necessary language development.

A criterion for the mathematics and statistics in materials for science and technical subjects

Lack of alignment in these subjects could have the effect of compromising the focus and coherence of the mathematics Standards. Instead of reinforcing concepts and skills already carefully introduced in math class, teachers of science and technical subjects would have to teach this material in stopgap fashion.

[S] **Consistency with CCSSM: Materials for science and technical subjects are consistent with CCSSM.** High school materials for these subjects build coherence across the curriculum and support college and career readiness by integrating key mathematics into the disciplines, particularly simple algebra in the physical sciences and technical subjects, and basic statistics in the life sciences and technical subjects (see Table 2 for a possible picture along these lines).

Table 2

Algebraic competencies integrated into materials for high school science and technical subjects	Statistical competencies integrated into materials for high school science and technical subjects
<ul style="list-style-type: none"> • Working with positive and negative numbers (including fractions) to solve problems • Using variables and writing and solving equations to solve problems • Recognizing and using proportional relationships to solve problems • Working with functions and their graphs to solve problems 	<ul style="list-style-type: none"> • Working with distributions and measures of center and variability • Working with simple probability and random sampling • Working with bivariate categorical data (e.g., two-way tables) • Working with bivariate measurement data (e.g., scatter plots) and linear models

Indicators of quality in instructional materials and tools for mathematics

The preceding criteria express important dimensions of alignment to the Standards. The following are some additional dimensions of quality that materials and tools should exhibit in order to give teachers and students the tools they need to meet the Standards:

- Problems in the materials are worth doing:
 - The underlying design of the materials distinguishes between *problems* and *exercises*. Whatever specific terms are used for these two types, in essence the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Problems are problems because students haven't yet learned how to solve them; students are learning from solving them. Materials use problems to teach mathematics. Lessons have a few well designed problems that progressively build and extend understanding. Practice exercises that build fluency are easy to recognize for their purpose. Other exercises require longer chains of reasoning.
 - Each problem or exercise has a purpose—whether to teach new knowledge, bring misconceptions to the surface, build skill or fluency, engage the student in one or several mathematical practices, or simply present the student with a fun puzzle.
 - Assignments aren't haphazardly designed. Exercises are given to students in intentional sequences—for example, a sequence leading from prior knowledge to new knowledge, or a sequence leading from concrete to abstract, or a sequence that leads students through a number of important cases, or a sequence that elicits new understanding by inviting students to see regularity in repeated reasoning. Lessons with too many problems make problems a commodity: they forbid concentration, and they make focus and coherence unlikely.
 - The language in which problems are posed is carefully considered. Note that mathematical problems posed using only ordinary language are a special genre of text that has conventions and structures needing to be learned. The language used to pose mathematical problems should evolve with the grade level and across mathematics content.
- There is variety in the pacing and grain size of content coverage.
 - Materials that devote roughly equal time to each content standard do not allow teachers and students to focus where necessary.
 - The Standards are not written at uniform grain size. Sometimes an individual content standard will require days of work, possibly spread over the entire year, while other standards could be sufficiently addressed when grouped with other standards and treated in a shorter time span.

- There is variety in what students produce: Students are asked to produce answers and solutions, but also, in a course-appropriate way, arguments, explanations, diagrams, mathematical models, etc. In a way appropriate to the grade level, students are asked to answer questions or develop explanations about why a solution makes sense, how quantities are represented in expressions, and how elements of symbolic, diagrammatic, tabular, graphical and/or verbal representations correspond.
- Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates. Teachers are supported in extending student explanations and modeling explanations of new methods. Lesson structure frequently calls for students to find solutions, explain their reasoning, and ask and answer questions about their reasoning as it concerns problems, diagrams, mathematical models, etc. Over time there is a rhythm back and forth between making sense of concepts and exercising for proficiency.
- There are separate teacher materials that support and reward teacher study, including:
 - Discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit.
 - Discussion of student ways of thinking with respect to important mathematical problems and concepts—especially anticipating the variety of student responses.
 - Guidance on interaction with students, mostly questions to prompt ways of thinking.
 - Guidance on lesson flow.
 - Discussion of desired mathematical behaviors being elicited among the students.
- The use of manipulatives follows best practices (see, e.g., *Adding It Up*, 2001):
 - *Manipulatives are faithful representations of the mathematical objects they represent.* For example, algebra tiles can be helpful in representing some features of algebra, but they do not provide particularly direct representations of all of the important mathematics. For example, tiles aren't particularly well suited as models for polynomials having non-integer coefficients and/or high degree.
 - *Manipulatives are connected to written methods.* For example, algebra tiles are a reasonable model of certain features of algebra, but not a reasonable method for doing algebra. Procedural skill and fluency refers a written or mental method, not a method using manipulatives or concrete representations.
- Materials are carefully reviewed by qualified individuals, whose names are listed, in an effort to ensure:
 - Freedom from mathematical errors¹¹

¹¹ Sometimes errors in materials are simple falsehoods, e.g., printing an incorrect answer to a problem; other errors are more subtle, e.g., asking students to explain why something is so when it has been defined to be so.

- Age-appropriateness
 - Freedom from bias (for example, problem contexts that use culture-specific background knowledge do not assume readers from all cultures have that knowledge; simple explanations or illustrations or hints scaffold comprehension).
 - Freedom from unnecessary language complexity.
- The visual design isn't distracting or chaotic, or aimed at adult purchasers, but instead serves only to support young students in engaging thoughtfully with the subject.
- Support for English language learners is thoughtful and helps those learners to meet the same standards as all other students. Allowing English language learners to collaborate as they strive to learn and show understanding in an environment where English is used as the medium of instruction will give them the support they need to meet their academic goals. Materials can structure interactions in pairs, in small groups, and in the large group (or in any other group configuration), as some English language learners might be shy to share orally with the large group, but might not have problem sharing orally with a small group or in pairs. (In addition, when working in pairs, if ELLs are paired up with a student who shares the same language, they might choose to think about and discuss the problems in their first language, and then worry about doing it in English.)

Appendix

“Lasting Achievements in K–8”

*Essay by Jason Zimba, July 6, 2011*¹²

Most of the K–8 content standards trace explicit steps $A \rightarrow B \rightarrow C$ in a progression. This can sometimes make it seem as if any given standard only exists for the sake of the next one in the progression. There are, however, culminating or capstone standards (I sometimes call them “pinnacles”), most of them in the middle grades, that remain important far beyond the particular grade level in which they appear. This is signaled in the Standards themselves (p. 84):

The evidence concerning college and career readiness shows clearly that the knowledge, skills, and practices important for readiness include a great deal of mathematics prior to the boundary defined by (+) symbols in these standards. Indeed, some of the highest priority content for college and career readiness comes from Grades 6–8. This body of material includes powerfully useful proficiencies such as applying ratio reasoning in real-world and mathematical problems, computing fluently with positive and negative fractions and decimals, and solving real-world and mathematical problems involving angle measure, area, surface area, and volume. Because important standards for college and career readiness are distributed across grades and courses, systems for evaluating college and career readiness should reach as far back in the standards as Grades 6–8. It is important to note as well that cut scores or other information generated by assessment systems for college and career readiness should be developed in collaboration with representatives from higher education and workforce development programs, and should be validated by subsequent performance of students in college and the workforce.

One example of a standard that refers to skills that remain important well beyond middle school is

7.EE.3:

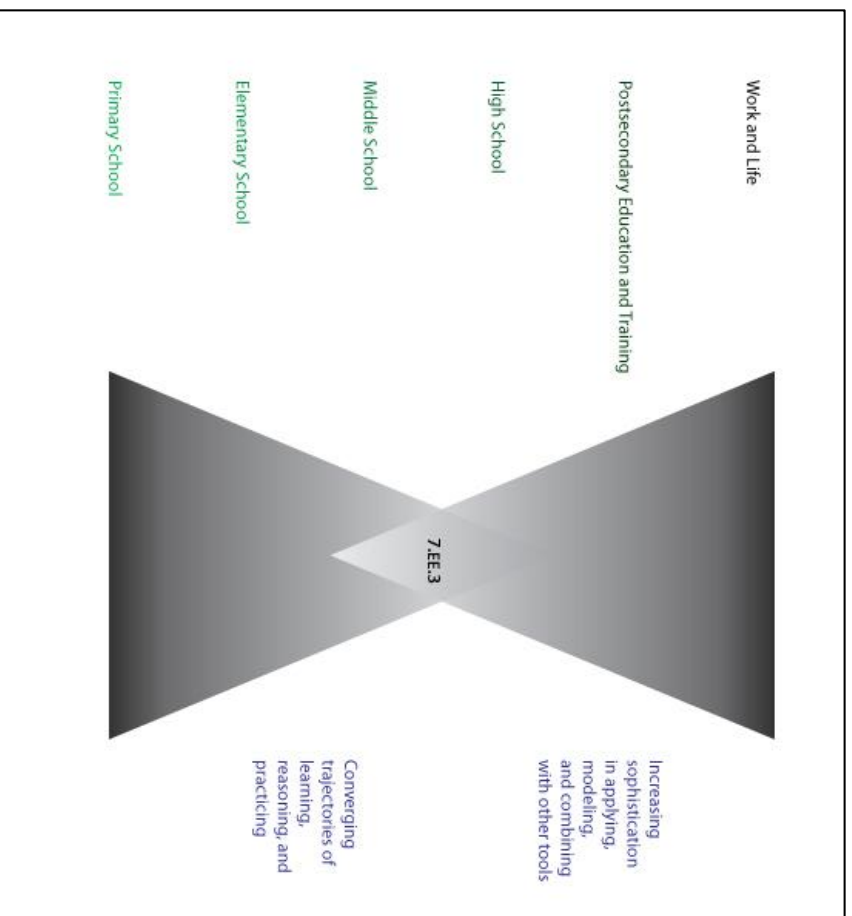
Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. *For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional $1/10$ of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar $9\ 3/4$ inches long in the center of a door that is $27\ 1/2$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.*

Other lasting achievements from K–8 would include working with proportional relationships and unit rates (6.RP.3; 7.RP.1,2); working with percentages (6.RP.3e; 7.RP.3); and working with area, surface area, and volume (7.G.4,6).

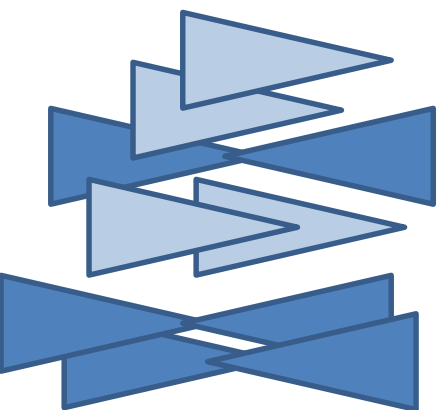
As indicated in the quotation from the Standards, skills like these are crucial tools for college, work and life. They are not meant to gather dust during high school, but are meant to be applied in increasingly flexible ways, for example to meet the high school standards for Modeling. The illustration below shows how these skills fit in with both the learning progressions in the K–8

¹² <http://commoncoretools.me/2011/06/15/essay-by-jason-zimba-on-pinnacle-standards/>

standards as well as the demands of the high school standards and readiness for careers and a wide range of college majors.



As shown in the figure, standards like 7.EE.3 are best thought of as descriptions of component skills that will be applied flexibly during high school in tandem with others in the course of modeling tasks and other substantial applications. This aligns with the demands of postsecondary education for careers and for a wide range of college majors. Thus, when high school students work with these skills in high school, they are not working below grade level; nor are they reviewing. Applying secure held mathematics to open-ended problems and applications is a *higher-order* skill valued by colleges and employers alike.



One reason middle school is a complicated phase in the progression of learning is that the pinnacles are piling up even as the progressions $A \rightarrow B \rightarrow C$ continue onward to the college/career readiness line. One reason we draw attention to lasting achievements here is that their importance for college and career readiness might easily be missed in this overall flow.