LAUSD- Course One Physical Education Matrix Chart
Instructional Component Aquatics
Suggested Length of Unit: Five to Eight Weeks (25 – 40 Days)

Grade Nine
Dry Land Aquatics Skills

Swimming is one of the most important skills students can learn. It is a great physical activity and also a life saving skill. It is essential for students in the Los Angeles Unified School District to acquire a knowledge of aquatic skills and safety because many live near or travel to nearby pools, lakes, and the ocean. Aquatic facilities may be limited or nonexistent at many District schools, but aquatics can still be taught. This unit has information that can be adapted for schools **without a pool**. Teachers at sites without pools can stress water safety, rescue techniques, dry land stroke, kick practice, and buoyancy principles.

Some students may have a fear of swimming, for this reason social and personal responsibilities are very important. Recognizing there may be potential fears it is important for teachers to put students at ease, make them comfortable in the learning process and keep them safe. Swimming increases student's strength and endurance. The purpose of the unit is for students to learn drowning-prevention strategies. It provides students with the basic knowledge and form for proper swimming movement so that when they have an opportunity to learn to swim in the water – the process is expedited. The focus of the unit is on the fundamentals of water safety, cardio-pulmonary resuscitation (CPR) first aid. A noteworthy point is that dry-land instruction will not ensure a student's ability to swim in water or under real-life circumstances.

Standards for Instructional Component Course 1 Aquatics

Standard Set 1: Students demonstrate knowledge of and competency in motor skills, movement patterns, and strategies needed to perform a variety of physical activities.

1.1 Combine, and apply movement patterns to progress from simple to complex in aquatics.
1.2 Demonstrate proficient movement skills in aquatics
1.3 Identify, explain, and apply the skill-related components of balance, reaction time, agility, coordination, explosive power, and speed that enhance performance levels in aquatics.
1.5 Explain, apply and evaluate the appropriate use of the biomechanical principles of leverage, force, inertia, rotary motion, opposition, and buoyancy to achieve advanced performance in aquatics.
1.7 Analyze and evaluate information received from proprioception, others, and from the performance of complex motor (movement) activities to improve performance in aquatics.
1.8 Analyze and explain which training and conditioning practices have the greatest impact on skill acquisition and performance in

aquatics.
1.9 Create or modify a practice/training plan based on evaluative feedback of skill acquisition and performance in aquatics
1.10 Analyze situations and determine appropriate strategies for improving performance in aquatics
1.11 Assess the effect/outcome of a particular performance strategy in aquatics
1.12 Demonstrate independent learning of movement skills.
Standard Set 2: Students achieve a level of physical fitness for health and performance while demonstrating knowledge of fitness concepts, principles, and strategies.
2.1-Participate in moderate to vigorous aquatic physical activity at least 4 days each week.
Standard Set 3: Students demonstrate knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.
3.1- Accept personal responsibility to create and maintain a physically and emotionally safe and non-threatening environment for physical activity.
3.2- Act independently of negative peer pressure during physical activity.

Course One: 9th Grade Instructional Component Aquatics

Key Concept for Content Standard Group: Striking with an implement

Content Standard Group	Analyzed Standard	Sample Performance Task	Sample Scoring Criteria for Performance Task
1.1	Combine, and apply movement patterns to progress from simple to complex in aquatics.	Students will apply the arm motion of the front and back crawl, breaststroke and elementary backstroke and appropriate kicks for each stroke on a bench, with the correct breathing pattern on a therapeutic ball or scooter.	Students are able to combine and apply the arm motion, flutter kick and breathing motion of the front and back crawl, breaststroke and elementary backstroke with the correct mechanics, timing for 2 minutes.
1.2	Demonstrate proficient movement skills in aquatics.	Students will demonstrate the motions to swim a coordinated front crawl (Pulling, kicking and side breathing) for 2 minutes.	Student's demonstration should include consistent coordination of pulling, kicking and side breathing for 2 minutes.

		Students will also demonstrate the motions to swim coordinated back crawl (pulling and kicking) for 2 minutes.	
1.3	Identify, explain, and apply the skill-related components of balance, reaction time, agility, coordination, explosive power, and speed that enhance performance levels in aquatics.	While watching proficient swimmers students will identify and explain the skill-related components of balance, reaction time, agility, coordination, explosive power, and speed that enhance the performance of the front and back crawl. While on scooter boards, benches or physio balls, students will be able to apply the skill-related components of balance, reaction time, agility, coordination, explosive power, and speed that enhance the performance of the front and back crawl.	Student will properly identify, explain and apply the skill-related components of balance, reaction time, agility, coordination, explosive power, and speed that enhance performance levels in aquatics while watching a swimmer at the beginning, intermediate and advanced level.
1.5	Students explain, apply and evaluate the appropriate use of the biomechanical principles of leverage, force, inertia, rotary motion, opposition, and buoyancy to achieve advanced performance in aquatics.	While watching a video of advanced swimmers who are racing in a front crawl swim race, that includes at least one turn of the pool wall, students will individually explain and evaluate in essay form the appropriate use of leverage, force, inertia, rotary motion, opposition, and buoyancy. Students will also apply the use of leverage, force, inertia, rotary motion, opposition and buoyancy in dry land training	Student's explanation will include the appropriate use of the biomechanical principles of leverage, force, inertia, rotary motion, opposition, and buoyancy to achieve advanced performance in aquatics in written essay. It will also must convey the following: duration of force application, force arm, resistance arm and the effects of fulcrums, the law of inertia, how to initiate and improve rotation in the body, the law of opposition and

		workouts that include weight lifting, jogging, running and 360-degree jump turns and forward rolls.	how it is relevant in the front crawl. Students must be able to apply these biomechanical principles in appropriate strength training, jogging, running, 360 degree jump turns, forward rolls with proper form for advanced performance.

Course One 9th Grade Instructional Component Aquatics

Content Standard Group	Analyzed Standard	Sample Performance Task	Sample Scoring Criteria for Performance Task
1.7	Students will analyze and evaluate information received from self, others, and the performance, of complex motor (movement) activities that leads to improved performance in aquatics.	In groups of three each student will create a portfolio on their front and back crawl performance and activities to improve their performance. Two students observing and one student lying prone on a narrow flat bench with the lower leg, from the top of the knees to the feet extended off the bench, performing the front and back crawl stroke. All three students will analyze and	Student portfolio will include: three performance evaluations, one from them self and two from their group members, an analysis of each students feedback including the self evaluation, an essay that compares and contrasts the three feedbacks, and a descriptive essay of activities to perform to improve performance in the front and back crawl.

		evaluate the performance in comparison with advanced performance. The student who performed will receive the evaluations from the other two students and self, analyze and evaluate all feedback, write a descriptive essay analyzing and evaluating each students feedback of what that student must do to improve their performance in the front and back crawl. The students will then rotate positions and repeat the task until all students have performed.	
1.8	Analyze and explain which training and conditioning practices have the greatest impact on skill acquisition and performance in aquatics.	Students will design a strength, flexibility and aerobic capacity training program for themselves that can be performed without a pool and is specific to aquatics.	Student's product will include a written defense and analysis that explains why the specific training and conditioning practices were chosen for each component of strength, flexibility and aerobic capacity. The student's program must include the anticipated results from implementing the plan for one month.

1.9	Students create or modify a practice/training plan based on evaluative feedback of skill acquisition and performance in aquatics.	After reviewing another students expected results from their training plan, students will modify the training plan designed to improve strength, flexibility and aerobic capacity.	Students must clearly identify what they have modified and include and explanation of why the modification is needed. This plan must include expected results from one month of implementation.

1.10	Students analyze and determine appropriate strategies for improved performance in aquatics.	Students will be given a short answer quiz with different situations that may occur around bodies of water (pool, lake, ocean etc.). Students will analyze these situations and determine the appropriate response for the situation given.	Each student will answer 80% of the questions correctly or retake the quiz.
1.11	Assess the effect/outcome of a particular performance strategy in aquatics	Students will assess the effect of another students training plan based on the students list of expected results after one month of implementation.	Student's assessment will include each expected result after one month of implementation and if the result was reached or not.

Course One 9th Grade Instructional Component Aquatics

Content Standard Group	Analyzed Standard	Sample Performance Task	Sample Scoring Criteria for Performance Task
1.12	Students demonstrate independent learning of movement skills.	Students will stay on task during class time given for independent learning.	When given class time for practicing tasks student stays on task practicing skills independently avoiding distractions and does not have to be reminded about task.
2.1	Students will participate in moderate to vigorous physical activity at least four days each week.	Students will perform warm-up activities at a brisk walk or greater, flexibility exercises with correct form and intensity, and class activities at the appropriate level at least four days each	Students will perform their warm-up activity, flexibility exercises and class activities at a moderate to vigorous level according to the SOFIT scale at least four days per week without being reminded.

		week.	
3.1	Students accept personal responsibility to create and maintain a physically and emotionally safe and nonthreatening environment for physical activity.	Students will learn and follow all rules in the LAUSD Water Safety Test and accept personal responsibility to create and maintain a physically and emotionally safe and non-threatening environment for aquatics activities, using only positive comments and encouraging statements.	Students will pass LAUSD Water Safety Test (written exam) at 80% or higher, follow class rules, use positive comments and encouraging statements and by alerting others of correct physical and emotional safety rules.
3.2	Students act independently of negative peer pressure during physical activity.	Student clearly avoids negative peer pressure and acts independently when making behavioral decisions.	Students avoid pupils that are not on tasks as described by the instructor, if a disturbance is happening students stay away and continue working independently.

Equipment and Instructional Materials

- Flat benches
- 24" large therapeutic balls
- Elastic resistance bands
- CPR practice dummies
- ¼ mile running track
- Strength training equipment
- Rope
- Stop watch
- One gallon plastic jugs
- Plastic mouth guards for rescue breathing practice dummies
- Life jackets

Pre-assessment

- Students will complete a questionnaire on their knowledge of LAUSD Water Safety Test at the start of the unit.
- Students will be pre-assessed on general personal Water Safety tips including: watching children around water, home pools, spas or hot tubs, pool parties, water parks, lakes and rivers, ocean safety
- Boating safety
- American Red Cross (ARC) Emergency Action Steps
- Rescue breathing
- Emergency first aid and
- Emergency Action Steps
- Diving safety
- Rescues from land – Reach or Throw, Don't Go!, Reaching Assists, Throwing and Wading assists
- Stroke mechanics: Front Crawl, Back Crawl, Breaststroke, Elementary backstroke, Entries and diving
- Breathe Control (mechanics)
- Floating on front and back (mechanics)
- Biomechanical principals of leverage, force, inertia, rotary motion, buoyancy and opposition
- FITT principals
- Principal of overload
- Principal of progression

Sample Scaffolding Strategies

- Perform all strokes on dry land on benches, scooters or large therapeutic balls
- Perform all rescues on dry land in simulated exercises
- End unit with visit to a pool, beach, lake or water park for culminating activities

Learning Experiences

1. **Break down of the skills and progression**

A. Water safety:

- The risks of drowning, head injury and back injury around water
- Watching children around water
- Home pool safety
- Spa and Hot tub safety
- Bath tubs, pool parties, water parks, lakes and rivers, ocean safety
- Life jackets
- Rescue devices
- Home made rescue devices
- Emergency action steps & plan
- Recognizing an emergency
- Calling for help
- Reaches, Throwing and Wading assists
- Rescue breathing and drowning
- CPR
- Skin, eyes, ears, feet and muscle cramp safety
- Boating safety

B. Stroke Mechanics:

- Front crawl
- Back crawl
- Breaststroke
- Elementary backstroke

C. Introduction to Water Skills:

- Water entry and exit
- Breath Control
- Floating on front and back
- Turning

- Swimming and propulsion from arms and legs
- Entries and diving

D. Dry land training for swimmers in strength, flexibility and aerobic capacity:
   - Frequency
   - Intensity
   - Time
   - Type
   - Overload
   - Progression

2. Employing Specific Methods

- Teach students strokes on benches, scooters or therapeutic balls
- Teach students the designated signal to start and stop activities
- Teach students optimum spacing distance for each activity
- Determine the appropriate protocol for distributing equipment prior to class
- Teach students specific care for CPR and rescue breathing dummies
- Teach students specific safety procedures when using scooters and therapeutic balls

Enrichment/Differentiated Instruction

A. Differentiated Instruction- it is important to distinguish the current skill level of your students in order to differentiate instruction and maximize learning. Teachers provide differentiated instruction and activities for multiple skill levels that address the needs of the students. Activities or drills should be challenging for students who have met the skill level and should offer additional practice opportunities for those that have not met the target skill level.

B. Enrichment – Teachers can often give instruction that broadens and extends student's level of understanding. Encouraging the students to take swimming classes outside of school is extremely important for the true aquatic experience.

C. Provide information on places to learn to swim, teams, and aquatic activities outside of school. In addition, teachers can provide students with a list of extracurricular resources in the community where they can play, participate on teams, and in races for continued growth.

Culturally Relevant and Responsive Instruction

- Use cultural references to impart knowledge, skills, and attitudes.
- Connect the learning to students' prior knowledge and experiences.
- Literature can be used to build prior knowledge or enhance student's awareness of a variety of swimmers, such Pablo Morales, Tamika Jaqmison, Martiza Correla, Enith Brigitha, Charles Chapman.
- Prior knowledge should be welcomed and acknowledged.

Accommodating Students with Special Needs

1. Safety
   - Contact the school nurse or designee to obtain pertinent medical information
   - Be aware of the students' medical ID tags for disability
   - The teaching progression and learning tasks should be differentiated (when applicable) to fit student needs.

2. Students in Wheelchairs
   - Students in wheelchairs should participate in all dry land rescues, CPR, Rescue Breathing and water safety to the best of their ability.
   - In dry land aquatics students in wheelchairs can learn the proper mechanics of the strokes.
   - Performing the strokes will depend on the individual limitations on a case-by-case basis.
   - While in water the body becomes buoyant, in many cases this allows for more ease of movement.

Equipment Tips

- Instruction on strokes will require the use benches and 'scooters' to allow for the simulation of the proper form. You may use pulleys or stretch bands tied to a fence or a hook socket in a wall to give resistance and provide strength training at the same time.
- In place of resistance bands you may use old inner tubes
- On therapeutic balls, scooters and benches can be used to simulate the swimming positions and movements
- On scooters students may actually be able to move them selves while using the swimming strokes
- Partner strength training routines can also be used in place of resistance machines
- Isokinetic resistance machines is most specific to the strength training needed

Instructional Tips

- Plan lessons with realistic expectations.
- Encourage early success with appropriate lessons and drills
- It is important to make the connection between dry land training and what will happen in the water
- It is important to have a culminating event in water

Communication Tips

- Praise even small steps of success
- Communicate using appropriate aquatic terminology
- Encourage social interaction with activities that emphasize working cooperatively with partners
- Promote good sportsmanship and appropriate behavior during all aquatic activities

Suggested Lead-Up Activities

- Single day work out plans
- One week work out plans
- One month work out plans
- Provide students with samples of work out plans

Teaching Aids

1. Warm-up activities-
   Specific to the movements for the muscles that you will use in the lesson and unit (arms circles, lunges forward and sideward, trunk rotation)
2. Stretches-
   Important to stretch the extensors and flexors of the forearm, shoulders, trunk rotators, abductors and adductors of the leg and ankles
3. Cool Down-
   Stretching while cooling down and reviewing the days lesson is important, repeat stretches that were specific to the day's lesson.
4. Skill tests-
   - In pairs groups of three, using a bench, scooter or therapeutic ball, students will be pre-tested on their mechanics of the front crawl, back crawl, elementary backstroke and breaststroke.
   - CPR
   - Reaching and throwing assists from land

5. LAUSD water safety test

Interdisciplinary Learning

Language arts

- Use a thesaurus to identify alternative word choices for designated vocabulary words
- Maintain a physical education journal in which students write about movement experiences
- Read books related to aquatics activity and write a one page summary

Mathematics

- Find the perimeter of selected swimming pools with various shapes and sizes
- Use graphs and charts to record progress from students train programs
- Calculate target heart rate using the heart rate reserve formula

History/Social Science

- Develop a aquatics timeline from the history of the Olympics and swimming
- Locate the home state of famous swimmers in the United States

Art

- Create a aquatics diorama
- Create a aquatics activity collage

Music- Create a movement activity to music simulating swimming strokes on a therapeutic ball, bench or scooter.

Science

- Learn how force is generated in the human body
- Apply the use of levers to movement in swimming
- Learn about the density of muscle, bone, and adipose tissue and its effect on floating

Technology

- Use heart rate monitors and pedometers in physical activity and interpret the data
- Videotape and analyze movement skills
- Make a webliography

Inclement Weather

Create a repertoire of instructional lessons related to this unit that can take place in sheltered areas during inclement weather. This will ensure continuation of standards-based instruction. Suggested activities include:

- Circuit training
- Flexibility stations
- Aerobic stations

Suggested Homework

- Write a three paragraph expository composition, which explains the history of swimming in the Olympics.
- Write a descriptive essay for each stroke taught in class.
- Create and describe a new swimming stroke.
- Create and describe one strength training exercise

Resources

- American Red Cross (ARC) - Health and Safety Services, Swimming and Life guarding
- American Red Cross (ARC) – Swimming and Water Safety
- American Red Cross (ARC) – Water Safety Instructor's Manual

Teacher Reflections

Good teaching should include ample time to reflect on the unit or lesson at the conclusion. Determine what worked well, what you might change and/or improve the next time you teach the unit. Focus on methods for grouping students, facilities, equipment, and the distribution of equipment, written assignments, handouts, visual aids and any other instructional aids that could enhance your instruction.

Physical Education Lesson Plan

High School Course 1
Dry Land Aquatics

Description:

Students will participate in a multi-station skill activity for three different types of swimming strokes.

Objectives:

- Students will demonstrate the reach, pull motion, and the recovery skills for the arm motion portion of the stroke. Students will demonstrate their swimming movements in a safe, secure, enjoyable learning environment.
- Students will know the effects that swimming has on their physical fitness.
- Students will demonstrate effective warm-up and cool down activities.

Standards Addressed:

1.1 Combine, and apply movement patterns to progress from simple to complex in aquatics.
1.2 Demonstrate proficient movement skills in aquatics
1.3 Identify, explain, and apply the skill-related components of balance, reaction time, agility, coordination, explosive power, and speed that enhance performance levels in aquatics.
2.1 Participate in moderate to vigorous physical activity at least 4 days each week.
2.2 Participate in challenging physical fitness activities that meet individual needs and interests using the principles of exercise.
3.1 Participate in physical activities for personal enjoyment.
3.9 Encourage others to be supportive and inclusive of all ability levels.

Materials:

- Elastic resistance/Stretch bands
- Flat benches or the availability of bleachers.
- 24" large therapeutic balls
- Scooter Boards
- Clipboards, pencils and Station record sheets for every other student.

Set-up:

Cones in place for Station delineation and station cards. Stretch bands attached to chain link fence/wall, wherever. Scooter boards and therapeutic balls in different areas. Clipboards, pencils, and score sheets placed in warm-up area.

Attendance & Warm Up

Accurate attendance will be taken and recorded by the teacher while students are doing warm-up activities.

Fitness Activity

Inform student that instead of taking a few laps in the pool to warm up, we will warm-up with a jog around a designated area. Review the F.I.T.T. principles with students for endurance/cardio activities. Explain the benefits of warm-up aerobic and elasticity training on the body as it pertains to swimming. Have students stretch the muscles to be used in the freestyle stroke, especially the Spinal Twist, Deltoid, Triceps, hamstring, and quads. Include push-ups and curl-ups on a cadence similar to the *Fitnessgram©*.

Learning Experiences

Divide all students into pairs, with one clipboard and skill check sheet. Have the paired students follow the station directions. Students will have three to four minutes at each station. Time will start once the students have rotated.

Learning Stations

1. **Stretch Band Stroke movement**: Students will, from a comfortable distance from the attached stretch band, use the arms and breathing motion of the crawl 30 to 50 times. The partner will encourage, refine, and coach for the proper reach, pull, breath/recovery motions using the skill check sheet for this station.
2. **Flutter Kick**: Students will lie on their front torso, legs stretched out beyond the bleacher/bench/therapeutic ball, practicing the flutter kick. 50 – 100 times. Using the station card to make sure that there is a slight bend at the knee, pointing toes on the up swing, and relaxing on the down swing.
3. **Stroke movement**: Students will be in a position on a bench/bleacher OR bent forward at the hips, so as to do a proper cross-body pull and head motion for the recovery phase of the side preferred.
4. **Stretch Band Stroke movement**: Students will, from a comfortable distance from the attached stretch band, use the arms and breathing motion of the butterfly 30 to 50 times. The partner will encourage, refine, and coach for the proper reach, pull, breath/recovery motions using the skill check sheet for this station.
5. **Dolphin Kick**: Students will lie on their front torso, legs stretched out beyond the therapeutic ball, practicing the dolphin kick. 25 – 50 times. Use the station card to make sure that there is a slight bend at the knees, pointing of toes on the up swing, and relaxing on the down swing.
6. **Stretch Band Stroke movement**: Students will lye on a bench, from a comfortable distance from the attached stretch band, and use the arm motions of the backstroke 30 to 50 times. The partner will encourage, refine, and coach for the proper reach, pull, recovery motions using the skill check sheet for this station.
7. **Backstroke Kick**: Students will have legs stretched out beyond the bleacher/bench/therapeutic ball, practicing the flutter kick. 25 - 50 times while lying on their back. Use the station card to make sure that there is a slight bend at the knee, pointing of toes on the up swing, and on the down swing.

Assessment:

- Teacher observations and feedback
- Peer observations and feedback
- Score Sheets records
- Learning Logs could assess the fun and/or self-development achieved.

Closure:

Have students return to the line-up area. Have students stretch to cool down while informing the class that the scores from the learning stations are an assessment of their skills for this lesson. Ask feedback on successes, and station rotations. Reiterate that their task is to try and improve their individual abilities.

Teacher Reflection:

Evaluate student progress from peer/group evaluations and teacher skills test to work on parts of the skills that need improvement for next lesson. (e.g. a part of the arm action from the backstroke needs improvement or is a weak area for the many of the students). Determine what worked well, what you might change and/or improve the next time you teach the unit. Focus on methods for grouping students, facilities, equipment, and the distribution of equipment, written assignments, handouts, visual aids and any other instructional aids that could enhance your instruction.

Scaffolding Strategies: Suggested concepts and skills to support student success on the performance task/assessment.

- Have a DVD/video at the station to demonstrate the stroke/kick/ breathing motions
- Begin the instruction without stretch bands
- Practice the basic skills in slow motion for greater initial success
- Create a cadence for the stroke and breathing… using a teacher generated tape/CD
- Perform all strokes on dry land and on benches/bleachers, scooters or large therapeutic balls
- Perform all rescues on dry land in simulated exercises
- End unit with visit to a pool, beach, lake or water park for culminating activities

Enrichment:

Encouraging the students to take swimming classes outside of school is extremely important for the true aquatic experience. Provide information on places to learn to swim, teams, and aquatic activities outside of school. In addition, teachers can provide students with a list of extracurricular resources in the community where they can play, participate on teams, and in competitions for continued growth.

Extending the Lesson:

- Investigate and report on outside of school opportunities for Swimming Trainings/Clubs and Competitions.
- Turn in a report on the evolution of swimming; include the state/country of origin, date, and the current world records.
- Complete a written report on the fun you and your friends shared in learning the different types of strokes.

Resources

Local pools, YM/WCA, websites (www.usaswimming.org), FIMA, Red Cross (website, WSI and guides), Books, charts, videos/DVD's (Waterproof Kids DVD).