



# LOS ANGELES UNIFIED SCHOOL DISTRICT REFERENCE GUIDE

**TITLE:** Implementation of the EPA’s Tools for Schools Program to Improve Indoor Air Quality

**NUMBER:** REF-5354.0

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Office of Environmental Health and Safety

**DATE:** December 1, 2010

**ROUTING**  
All Schools & Offices

**PURPOSE:** The purpose of this Reference Guide is to provide information on how to address indoor air quality issues at District sites and the type of resources available when local action is insufficient to resolve the problem.

**MAJOR CHANGES:** This is a new Reference Guide.

**BACKGROUND:** The District has partnered with the U.S. Environmental Protection Agency (EPA) and the American Lung Association of California in implementing the “IAQ Tools for Schools” program. The Los Angeles Unified School District (LAUSD) Board of Education recognized the value of the program and recommends its implementation as demonstrated in the January 23, 2001 resolution “Indoor Air Quality and Respiratory Health in Schools.”

The Office of Environmental Health and Safety (OEHS) in collaboration with Nursing Services has implemented this nationally-recognized program, where site teams work together to assess indoor air quality conditions in classrooms or offices, identify problems, and develop plans to resolve them. The program is designed to take a minimal amount of time while meeting the goals of optimizing performance, increasing attendance and improving academic achievement of students and staff.

**INSTRUCTIONS:** I. GENERAL PROVISIONS

The EPA’s Tools for School Program is a voluntary program encouraged by the District to enhance indoor learning and working environments. This little to no cost approach includes an IAQ Tools for Schools Action Kit which guides schools and District offices in carrying out a practical plan to improve indoor air quality. The kit provides best practices that save time and money so that resources can be directed toward educating children.



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A summary of the program contents is provided in Attachment A. Background information on indoor air quality factors is provided in Attachment B. See Attachments C through F for LAUSD specific checklists designed for teaching, office and custodial staff.

To obtain the full Tools for Schools Action Kit, contact Nursing Services at 213-765-2800. The Action Kit includes:

- Tools for Schools Manual
- IAQ Coordinator's Guide
- Training DVD
- Problem Solving Wheel
- IAQ Checklists
- IAQ Backgrounders

## II. ROLES AND RESPONSIBILITIES:

### A. Schools and District Offices

District sites concerned about indoor air quality should implement the Tools for Schools Program to help prevent IAQ problems from arising and use the procedures provided within to address initial complaints.

If IAQ concerns or complaints cannot be resolved by using the recommended practices, then OEHS and Maintenance & Operations should be contacted. Employees should speak with the site administrator/supervisor before filing a complaint with OEHS. In many instances, the collaborative procedures recommended by the Tools for Schools program are successful in addressing IAQ concerns.

### B. Office of Environmental Health and Safety

OEHS responds to health and safety concerns, including indoor air quality, at District facilities. OEHS will investigate and conduct environmental testing when warranted to determine underlying causes contributing to the complaint. A corrective action notice will be issued to the school which prioritizes follow-up actions that are required and identifies the responsible parties.

### C. District Nursing Services

Nursing Services provides grant-funded training to District sites on the implementation of the Tools for Schools Kit through the LAUSD Asthma



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Program. Contact Nursing Services directly to request assistance or training.

### **RELATED RESOURCES:**

[Board Resolution: "Reduction in Air Pollution Health Risks at Schools" \(1/22/08\)](#)  
[EPA IAQ Tools for Schools Action Kit](#)  
[Integrated Pest Management \(IPM\) Policy](#)  
[BUL-3845 "Live Animals in Classroom, Service Animals and School Sponsored and Non-School Sponsored Activities Involving Animals"](#)  
[Reference Guide REF-886.1 Health Advisory/Air Pollution Episodes](#)  
[Safety Alert 01-04: Procedures - Toxic Air Release \(Nov. 2001\)](#)  
[Safety Alert 03-02: Procedures – Responding to Toxic Air Emissions \(Feb. 2003\)](#)  
[Safety Alert 05-02: Indoor Environmental Quality \(Jan. 2005\)](#)  
[Safety Alert 05-03: Approval of Chemical Products for District Use \(Rev. April 2006\)](#)  
[Safety Alert 05-09: Reporting School Air Quality and Health Concerns \(Aug. 2005\)](#)  
[Safety Alert 07-01: Particulate Emissions from Laser Printers \(Aug. 2007\)](#)  
[Focus on Safety, Issue 2, 04/05 \(Spring 2005\) – "Understanding Mold"](#)  
[Focus on Safety, Issue 7, 06/07 \(Fall 2006\) – "Improving Air Quality in Your Classroom"](#)

**ASSISTANCE:** For assistance or further information, please contact:

Office of Environmental Health and Safety (OEHS) 213-241-3199, or visit the OEHS website at: <http://www.lausd-oehs.org>

LAUSD Nursing Services at 213-765-2800 or <http://www.asthmala.com/>

[South Coast Air Quality Management District](#) (AQMD) – for air quality concerns at 1-800-CUT-SMOG (1-800-288-7664)

[County of Los Angeles, Public Health](#), Toxics Epidemiology Program – for health concerns at 213-738-3220

## Tools for Schools Program

Indoor air pollution is a public health risk that affects everyone; children are the most vulnerable population. Research has shown that poor indoor air quality plays a strong role in triggering asthma episodes and other allergic reactions. This is a major problem in schools because more than 6 million children nationwide have asthma. Children with asthma miss more than 14 million school days each year, negatively affecting their education. Indoor Air Quality (IAQ) programs can substantially reduce the level of indoor air pollution thereby enhancing the health and educational performance of children, as well as employee productivity.

### 1. IAQ Tools for Schools Action Kit

The Tools for Schools (TfS) Action Kit guides schools and District offices in carrying out a practical plan to improve IAQ at little or no cost using straightforward activities and in-house staff. The Action Kit provides best practices that help prevent IAQ problems. This saves the time and money it would take to resolve IAQ problems so those resources can be directed toward educating children. The Action Kit has many useful components to help design and implement IAQ best practices. Through the use of the checklists and building walkthroughs schools and offices can identify potential IAQ problems. The District Nursing Asthma Program disseminate the kits to school sites, with a training DVD presented by Huell Howser.

### 2. Site Responsibility

To effectively implement the program, an IAQ Coordinator and/or IAQ Team should be designated. At school sites, the IAQ Coordinator could be the Health Teacher, School Nurse, a member of the mandated Safe School Committee or other staff member as designated by the site administrator. At District offices, the coordinator can be designated by the administrator in charge of the office or site. This program is designed to take a minimal amount of time to implement. In collaboration with the site administrator, the IAQ Coordinator or Team should take the following steps:

- *Review the Checklists*

Review the checklists and background materials provided in the TfS Action Kit. The IAQ Coordinator and/or Team may wish to introduce the checklists during a staff meeting. The information provided by the checklists is essential to the success of the IAQ program and can help schools focus their efforts during their walkthrough. LAUSD customized these checklists to be used by specific school staff: Teacher's Classroom Checklist (Attachment C), PE Teacher's Checklist (Attachment D), Office Staff Checklist (Attachment E) and the Plant Manager's Building and Grounds Checklist (Attachment F).

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The IAQ Coordinator or Team should record all completed checklists on the Checklist Log and review the information to create a list of areas that require further evaluation during the walkthrough inspection. A map of the facility may be useful for tracking the location of concern and determining where potential pollutant sources exist.

- *Complete the Walkthrough*

The LAUSD “Tools for Schools” DVD featuring Huell Howser provides important insight into conducting a site inspection and should be viewed before the walkthrough.

The general walkthrough is not an intensive and detailed inspection, but rather a quick overview of the conditions that affect the quality of air within the school or office. It is valuable for the entire IAQ Team to participate in the walkthrough; however, someone who is familiar with the operation of the building, such as the Plant Manager, is vital. Areas identified as concerns in the checklists should be investigated at this time. Be sure to include special-use areas such as the cafeteria, art rooms, industrial arts, science laboratories and maintenance storage areas.

Use all of your senses when investigating factors that affect IAQ. Observe the general level of cleanliness in classrooms and offices. Look for pollutant sources such as mold, improperly stored chemicals, dirty air filters or ducts, and blocked airflow pathways (e.g., books or papers on top of unit ventilators or plywood covering outdoor air intakes).

Note any unique or objectionable odors as you move from room to room. Be aware of uncomfortable air temperatures, drafts, high or low humidity, and air flowing out of grilles and vents. Listen to the concerns of school occupants regarding IAQ. Make note of noisy ventilation systems.

- *Identify, Prioritize, and Resolve Problems*

The checklists and walkthrough inspection may reveal some IAQ problems. The Problem Solving Wheel, provided in the Action Kit, can assist in identifying potential sources based on health symptoms. Where possible, resolve IAQ issues as you conduct the walkthrough.

Once the problems are identified, prioritize projects into short-term and long-term categories. Implement solutions that affect health or safety first. Then focus on problems that can be resolved by low-cost and/or in-house measures. Many hazards can be corrected by simply educating staff to change their behaviors and enhancing communication (e.g., explaining to teachers that placing books on top of unit-ventilators or posters on air-return grilles prevents fresh air from circulating).

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Make a “to-do” list and include any unresolved problems from previous checklists. This list can be incorporated into the plan for implementing long-term IAQ improvements.

- *Establish a Checklist Interval.*

To maintain a healthy indoor environment, it is important to establish a checklist interval. The IAQ Coordinator’s Checklist should be completed at least twice each year. The beginning of the school year and midway through, such as after winter break, work well.

- *Follow-up*

Follow-up inspections are instrumental in determining whether repairs were performed according to specifications, if intended results were obtained, if those areas are being properly maintained and communicated to in a way that reduces occupant concerns.

- *Develop a Schedule of IAQ Events*

Develop and maintain a schedule of events that may affect the indoor environment. Whenever possible, take preventive measures such as trimming trees to prevent leaves and debris from clogging ventilation systems or downspouts. Note dates of scheduled renovations or construction activities and ensure potential impacts are communicated to occupants well in advance. Incorporate training into general staff meetings to ensure staff understands how individual behaviors can influence IAQ.

- *Recordkeeping*

For future reference and accountability, all paperwork should be filed in a readily accessible and centralized location. Files should include completed checklists, copies of memos, status reports, and final reports and communications with school or District staff.

### 3. Addressing Complex Indoor Air Quality Concerns or Complaints

Effective implementation of the Tools for Schools Program will enable school sites and District offices to address most IAQ complaints themselves. However, there may be situations in which additional assistance is needed. The Office of Environmental Health and Safety is the District-designated office which addresses IAQ concerns, and is the appropriate office to contact when sites are unable to resolve IAQ issues.

## General Indoor Air Quality

In recent years, comparative risk studies performed by EPA and its Science Advisory Board have consistently ranked indoor air pollution among the top five environmental risks to public health. Failure to prevent or respond promptly to indoor air quality (IAQ) problems can increase long- and short-term health problems for students and staff, aggravate asthma and negatively affect our primary goal of educating children.

The developing bodies of children are typically more susceptible to environmental exposures than those of adults. Children breathe more air, eat more food, and drink more liquid in proportion to their body weight than adults. Therefore, air quality in schools is of particular concern.

### **1. Contributing Factors that Affect Indoor Air Quality**

The indoor environment in any building is a result of the interactions among the site, climate, building structure, mechanical systems, construction techniques, contaminant sources and building occupants. Indoor air pollutants can originate within a building or be drawn in from outdoors. It is important to control air pollutant sources, or IAQ problems can arise—even if the Heating, Ventilation and Air Conditioning (HVAC) system is operating properly.

The following is an example of this interaction: A minor roof leak and a dirty classroom with carpet might not cause much concern. But if the water from the roof leak reaches the carpet, the water will wet the dirt in the carpet and any dormant mold that existed. The mold can grow and become a pollutant source that releases spores into the classroom air. The HVAC system acts as a pathway that disperses the spores to other parts of the school, where occupants may experience allergic reactions.

### **2. Asthma**

Asthma is the most common serious chronic disease of childhood. During an asthma episode, the airways in the lungs narrow making it difficult to breathe. An average of one out of every 13 school-aged children has asthma. Fourteen million school days are missed each year due to asthma.

Asthma can be controlled with proper management. Students should have a written asthma action plan, which communicates steps to be taken in case of an asthma episode. There are two kinds of asthma medications: a controller medication used at home to reduce inflammation, and a quick relief medication to treat symptoms when they first occur and to pre-medicate before physical activity. California law allows students to carry and self-administer asthma medications at school with written doctor and parent approval.

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There is substantial evidence that indoor environmental exposure to allergens, such as dust mites, pests, and molds, plays a role in triggering asthma symptoms. There is also evidence that exposure to diesel exhaust from school buses and other vehicles exacerbates asthma.

### **3. Typical Allergy and Asthma Triggers**

Because Americans spend up to 90 percent of their time indoors, exposure to indoor allergens and irritants may play a significant role in triggering asthma or allergic episodes. Some of the most common environmental asthma triggers are listed below.

- *Dust Mites*

Dust mites are too small to be seen, but they are found in homes, schools, and other buildings throughout the United States. Dust mites live in mattresses, pillows, carpets, fabric-covered furniture, bedcovers, clothes, stuffed toys and piles of old paper. Their primary food source is dead skin flakes. Dust mite allergens may cause an allergic reaction or trigger an asthma episode. In addition, there is evidence that dust mites may cause asthma or other allergic reactions.

Dust mite exposure can be minimized by vacuuming with high-efficiency filters carpet and fabric-covered furniture regularly. Remove dust from hard surfaces with a damp cloth and sweep floors frequently. Reduce clutter and piles of paper in classrooms and offices by storing items in closeable bins or file cabinets. Frequently clean out desks, lockers, closets and other storage areas to eliminate clutter so that classrooms and offices can be thoroughly swept and mopped.

- *Cockroaches and Vermin*

Cockroaches and vermin such as rats and mice may exist in the school setting. Certain proteins in waste products and saliva of cockroaches act as allergens and can cause allergic reactions or trigger asthma attacks in some individuals. It is important to avoid exposure to these allergens through the use of commonsense approaches and integrated pest management (IPM) practices throughout the entire facility. Pest problems in schools may be caused or worsened by a variety of conditions which include plumbing leaks, moisture problems, and improper food handling and storage practices.

Exposure to these pests can be minimized by removing or covering food or garbage found in classrooms, kitchens and employee break areas. Food should be stored in airtight containers. Clean all food crumbs or spilled liquids immediately. Be sure to contact the District's Pest Control Unit to address pest issues.



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- *Animal Allergens and Dander*

Any warm-blooded animal – including gerbils, birds, cats, dogs, mice, and rats – can cause allergic reactions or trigger asthma attacks. Proteins in the dander, urine, or saliva of warm-blooded animals may act as allergens. The most common source of animal allergens in schools is a pet in the classroom. If an animal is present in the school, direct exposure to the animal's dander and bodily fluids is possible. It is important to realize that, even after extensive cleaning, pet allergen levels may stay in the indoor environment for several months after the animal is removed.

Schools can minimize exposure to animal allergens by seating sensitive students away from pets or by removing the pets from the classroom. Cages and the surrounding area should be cleaned regularly and located away from ventilation systems. The classroom should also be vacuumed frequently.

- *Mold*

Molds can be found almost anywhere; they can grow on virtually any substance when moisture is present. Molds produce tiny spores for reproduction that travel through the air continually. When mold spores land on a damp spot indoors, they may begin growing and digesting whatever they are growing on in order to survive. Molds can grow on wood, paper, carpet, and food. If excessive moisture or water accumulates indoors, extensive mold growth may occur, particularly if the moisture problem remains undiscovered or is ignored. Eliminating all mold and mold spores in the indoor environment is impractical - the most effective way to control indoor mold growth is to control moisture.

When mold growth occurs in buildings, reports of health-related symptoms from some building occupants, particularly those with allergies or respiratory problems, may follow. Potential health effects and symptoms associated with mold exposures include allergic reactions, asthma, and other respiratory complaints.

Elevated levels of mold indoors can be minimized by repairing plumbing leaks and other sources of water intrusion. Clean mold off hard surfaces with water and detergent, then dry completely. Porous materials, such as ceiling tiles and carpet, must be replaced if they are contaminated with mold. Be sure to contact Maintenance and Operations to assist with all mold remediation efforts.

- *Emissions from Motor Vehicles and Equipment*

Emissions from gas- or diesel-powered engines are a source of pollution for schools. Exhaust emissions typically come from sources such as school buses, cars, delivery trucks and equipment used for construction or grounds maintenance. With sufficient

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concentrations and duration, these pollutants may increase the chance of cancer or other serious health effects, such as asthma.

LAUSD's Transportation Branch enforces a non-idling policy which offers a smart, effective, and immediate way to reduce emissions at no cost. The easiest way to reduce vehicle idling emissions is to "Just turn it off!" Whenever possible ensure that vehicles or other powered equipment are not operated near air supply vents or other HVAC equipment which would allow exhaust to be taken into a building or office.

- *Secondhand Smoke*

Secondhand smoke is the smoke from the burning end of a cigarette, pipe, or cigar or the smoke exhaled by a smoker. Exposure to it can cause a number of serious health effects in young children, such as coughing, wheezing, bronchitis, pneumonia, ear infections, reduced lung function, and more severe asthma attacks. Secondhand smoke is an irritant and increasing evidence suggests that it may cause asthma in preschool-aged children. EPA estimates that between 200,000 and 1,000,000 children with asthma have exacerbated conditions caused by exposure to secondhand smoke. Secondhand smoke can also lead to buildup of fluid in the middle ear -- the most common reason for operations in children.

LAUSD prohibits smoking on school grounds or District property and facilities. However, smoking often occurs near school or office entrances. If smoking occurs within the building, secondhand smoke can travel through the ventilation system to the entire school. Even when people smoke outside, secondhand smoke may enter the school through the ventilation system, windows, and doors.

#### **4. Chemicals, Cleaning Supplies and Personal Care Products**

Odors and fragrances that are typically associated with cleaning and personal care products can be enjoyable to some occupants and problematic to others. Strong odors can exacerbate asthma for many people and should be avoided. The use of chemicals and cleaning supplies do impact indoor air quality. District sites are authorized to use only those chemical products which have been reviewed and approved by the Office of Environmental Health and Safety. A list of all chemical products approved for District use and the Material Safety Data Sheets for these products may be accessed from the OEHS web site by going to [www.lausd-oehs.org](http://www.lausd-oehs.org) and selecting "Product Review."

#### **5. Integrated Pest Management**

Pesticides use is prohibited at District sites except by authorized Pest Control Technicians.

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When used, they can affect indoor air quality. However, the presence of pests and vermin can also adversely affect the school and work environment. Indoor environments that are free of pests, such as ants, cockroaches, and rodents have positive impact on the learning conditions and the health and safety of occupants. These pests leave behind residue, dander and other irritants that adversely affect indoor air quality.

The LAUSD Board of Education adopted an IPM Policy for use District-wide in March 1999. The IPM policy provides guidance and direction in managing pests while minimizing the use of pesticides, with the ultimate goal of using no pesticides. All members of the school community, including principals, students, teachers, parents, custodians, cafeteria staff, and craftspeople, have an important role in the success of the IPM program.



# Teacher's Classroom Checklist

Name: \_\_\_\_\_  
 School: \_\_\_\_\_  
 Room or Area: \_\_\_\_\_ Date Completed: \_\_\_\_\_  
 Signature: \_\_\_\_\_

**Assess the status of the following:**

**1. GENERAL CLEANLINESS**

	Yes	No	N/A
1a. Rooms are dusted/vacuumed regularly according to the maintenance schedule .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1b. Rooms are free of clutter .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1c. Trash is removed regularly according to the maintenance schedule .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1d. Food is removed daily and not stored overnight .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1e. Cleaners and air fresheners, if any, are unscented and District approved .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1f. Room is free of pests and vermin .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1g. Student desks are free of clutter and debris .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**2. ANIMALS IN THE CLASSROOM**

2a. Exposure to animal allergens are minimized .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2b. Animals are kept in cages (as much as possible) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2c. Cages are cleaned regularly .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2d. Animal cages are placed away from air vents.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2e. The school nurse has been consulted about student allergies or sensitivities (privacy laws may limit the information that health officials can disclose) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2f. Animal food is stored in tightly sealed containers .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2g. Sensitive students are moved away from animals and their habitats .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**3. DRAIN TRAPS IN THE CLASSROOM**

3a. Water is poured down floor drains once per week (approx. 1 quart of water) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3b. Water is run in sinks at least once per week (about 2 cups of water) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3c. Toilets are flushed at least once each week, especially if not used regularly .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**4. EXCESS MOISTURE IN CLASSROOMS**

4a. Condensation is wiped from windows, windowsills, and window frames .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4b. Cold water pipes are checked for moisture and dried .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4c. Indoor surfaces of exterior walls are free of condensation .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4d. Areas around and under classroom sinks are free of leaks .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4e. Classroom bathrooms are free of leaks .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4f. Ceiling tiles and walls are free of water damage (discoloration may indicate periodic leaks).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4g. Spills are cleaned promptly .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions**

1. Check your classroom for things that could negatively impact the indoor air quality for you and your students.
2. Keep in mind actions that you and your students can take to make your classroom more "asthma friendly" and improve the indoor environment for everyone.
3. Complete the Checklist.
  - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
  - Make comments on a separate page and turn in with this check sheet.
4. Return the checklist and any comments to the IAQ Coordinator.

**5. THERMAL COMFORT**

	Yes	No	N/A
5a. Temperature is moderate (should generally be 72°F–76°F) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5b. Students are seated away or shaded from direct sunlight .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5c. Classroom is free of excessive drafts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5d. Indoor humidity is maintained at acceptable levels (between 30 and 60 percent) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5e. Sources of heat, such as computers, are located away from the thermostat.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**6. VENTILATION**

6a. Air supply and return vents have been located and are free of obstructions ....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6b. Thermostat set to “fan on” position for continuous ventilation .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6c. Air is flowing from supply vent.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6d. Classroom is free of vehicle exhaust, kitchen/food, and chemical odors.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6e. Area is free of signs of mold or mildew .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6f. Windows and transoms can be opened for fresh air .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**7. EDUCATIONAL SUPPLIES (Art, Science, Industrial/Vocational)**

7a. Supplies and their labels have been reviewed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7b. Food art is stored in sealed containers or removed .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7c. Material Safety Sheets for chemicals are available.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7d. Spill clean-up procedure has been developed and implemented.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7e. All containers are dated and labeled with precautionary information .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7f. Supplies are stored according to manufacturers’ recommendations .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7g. Procedures for disposal of used substances are understood and followed .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7h. Compressed gas cylinders are stored securely .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7i. Chemical storage areas are separated from the main classroom area and are ventilated separately.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7j. Diluted substances are used rather than concentrates, wherever possible .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7k. Exposure to hazardous materials is minimized.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7l. Fume hoods are used to capture respirable particles, gases, and vapors and vented outside of the classroom .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**8. LOCAL EXHAUST FANS**

8a. Major pollutant-generating activities are identified.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8b. Exhaust fans have been located .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8c. Fans are operable .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8d. Adjacent rooms and halls are free of odor .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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# PE Teacher's Checklist

Name: \_\_\_\_\_  
 School: \_\_\_\_\_  
 Room or Area: \_\_\_\_\_ Date Completed: \_\_\_\_\_  
 Signature: \_\_\_\_\_

**Instructions**

- Check the gym, classrooms and locker rooms for things that could negatively impact the indoor air quality for you and your students.
- Keep in mind actions that you and your students can take to make your rooms more "asthma friendly" and improve the indoor environment for everyone.
- Complete the Checklist.
  - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
  - Make comments on a separate page and turn in with this check sheet.
- Return the checklist and any comments to the IAQ Coordinator.

**Assess the status of the following:**

**1. GENERAL CLEANLINESS OF GYM, CLASSROOMS AND LOCKER ROOMS**

	Yes	No	N/A
1a. Rooms are dusted/vacuumed regularly according to the maintenance schedule .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1b. Rooms are free of clutter .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1c. Trash is removed regularly according to the maintenance schedule.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1d. Food is removed daily and not stored overnight.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1e. Rooms are free of pests and vermin.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1f. Cleaners and air fresheners, if any, are unscented and District approved.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**2. DRAIN TRAPS IN THE GYM, CLASSROOMS AND LOCKER ROOMS**

2a. Water is poured down floor drains once per week (approx. 1 quart of water) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2b. Water is run in sinks at least once per week (about 2 cups of water) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2c. Toilets are flushed at least once each week, especially if not used regularly .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**3. EXCESS MOISTURE IN GYM, CLASSROOMS AND LOCKER ROOMS**

3a. Condensation is wiped from windows, windowsills, and window frames.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3b. Cold water pipes are checked for moisture and dried .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3c. Indoor surfaces of exterior walls are free of condensation .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3d. Areas around and under sinks are free of leaks .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3e. Classroom bathrooms are free of leaks.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3f. Ceiling tiles and walls are free of water damage (discoloration may indicate periodic leaks).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3g. Spills are cleaned promptly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**4. THERMAL COMFORT**

- |   | Yes                      | No                       | N/A                      |
|---|--------------------------|--------------------------|--------------------------|
| 4a. Temperature is moderate (should generally be 72°F–76°F) .....                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4b. Students are seated away or shaded from direct sunlight .....                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4c. Classroom is free of excessive drafts.....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4d. Indoor humidity is maintained at acceptable levels (between 30<br>and 60 percent) ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4e. Sources of heat, such as computers, are located away from the thermostat.....           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



**5. VENTILATION**

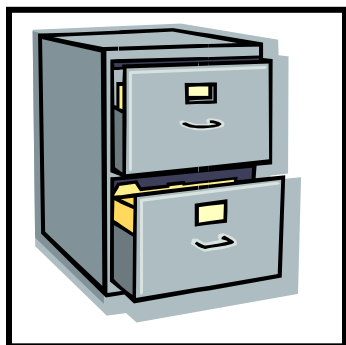
- |   |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|
| 5a. Ventilation unit has been located.....                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5b. Air supply and return vents have been located .....                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5c. Thermostat set to “fan on” position for continuous ventilation .....      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5d. Air is flowing from supply vent.....                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5e. Air supply vents are free of obstructions .....                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5f. Areas are free of vehicle exhaust, kitchen/food, and chemical odors ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5g. Areas are free of signs of mold or mildew.....                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5h. Windows and transoms can be opened for fresh air .....                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**6. LOCKER ROOM**

- |   |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|
| 6a. Locker/shower room are cleaned regularly according to the<br>maintenance schedule ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6b. Soiled clothes are removed regularly.....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6c. Wet towels are removed from locker room daily.....                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6d. There is water in the drain trap .....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6e. The local exhaust fan is functioning properly and used<br>consistently .....            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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**NOTES**



# Office Staff Checklist

Name: \_\_\_\_\_  
 School: \_\_\_\_\_  
 Room or Area: \_\_\_\_\_ Date Completed: \_\_\_\_\_  
 Signature: \_\_\_\_\_

## Instructions

1. Check the school for things that could negatively impact the indoor air quality
2. Keep in mind actions you and your staff can take to create a better work and learning environment for everyone.
3. Complete the Checklist.
  - Check the “yes,” “no,” or “not applicable” box beside each item. (A “no” response requires further attention.)
  - Make comments in the “Notes” section as necessary.
4. Return the checklist and any comments to the IAQ Coordinator.

## 1. GENERAL CLEANLINESS

- |  | Yes                      | No                       | N/A                      |
|--|--------------------------|--------------------------|--------------------------|
| 1a. Offices are dusted/vacuumed according to the maintenance schedule .....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1b. Trash is removed regularly according to maintenance schedule .....             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1c. Food is removed daily and not stored overnight .....                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1d. The office is free of pests and vermin.....                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1e. Cleaners and air fresheners, if any, are unscented and District approved ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## 2. EXCESS MOISTURE IN OFFICES

- |  |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|
| 2a. Condensation is wiped from windows, windowsills, and window frames ....                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2b. Cold water pipes are checked for moisture and dried .....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2c. Indoor surfaces of exterior walls are free of condensation .....                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2d. Areas around and under sinks are free of leaks.....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2e. Bathrooms are free of leaks .....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2f. Ceiling tiles and walls are free of water damage (discoloration may indicate periodic leaks) ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2g. Spills are cleaned promptly.....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## 3. THERMAL COMFORT

- |  |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|
| 3a. Temperature is moderate (should generally be 72°F–76°F) .....                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3b. Sources of heat, such as computers, are located away from thermostats .....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3c. Offices are free of excessive drafts .....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3d. Indoor humidity is maintained at acceptable levels (between 30 and 60 percent) ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## 4. VENTILATION

- |  |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|
| 4a. Ventilation unit has been located .....                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4b. Air supply and return vents have been located .....                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4c. Thermostat set to “fan on” position for continuous ventilation .....       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4d. Air is flowing from supply vent .....                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4e. Air supply vents are free of obstructions .....                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4f. Offices are free of vehicle exhaust, kitchen/food, and chemical odors..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4g. Offices are free of signs of mold or mildew .....                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4h. Windows and transoms can be opened for fresh air .....                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

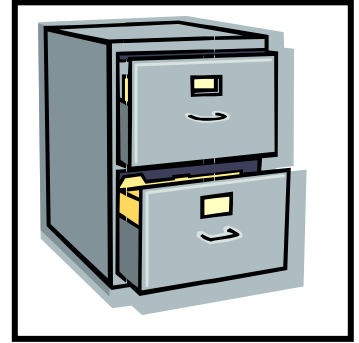


**5. LOCAL EXHAUST FANS**

- |  | Yes                      | No                       | N/A                      |
|--|--------------------------|--------------------------|--------------------------|
| 5a. Exhaust fans have been located.....            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5b. Fans are operable.....                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5c. Adjacent rooms and halls are free of odor..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**6. PRINTING/DUPLICATING EQUIPMENT**

- |   |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|
| 6a. Check for odors from equipment.....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6b. Equipment is maintained regularly (date of most recent servicing is usually documented on the machine).....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6c. Equipment functions properly.....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6d. Duplicating equipment, printers, and copiers are located in a well-ventilated area (preferably in a separate room with an exhaust fan vented to the outside)..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



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**NOTES**



# Plant Manager's Building And Grounds Checklist



Name: \_\_\_\_\_  
 School: \_\_\_\_\_  
 Room or Area: \_\_\_\_\_ Date Completed: \_\_\_\_\_  
 Signature: \_\_\_\_\_

**Instructions**

- Check the school for things that could negatively impact the indoor air quality.
- Keep in mind actions you and your staff can take to create a better work and learning environment for everyone.
- Complete the Checklist.
  - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
  - Make comments in the "Notes" section as necessary.
- Return the checklist and any comments to the IAQ Coordinator.

## 1. BUILDING & GROUNDS MAINTENANCE SUPPLIES

- |  | Yes                      | No                       | N/A                      |
|--|--------------------------|--------------------------|--------------------------|
| 1a. Develop spill control procedures and stock supplies accordingly .....                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1b. Review supply labels and MSDS.....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1c. Chemical and trash storage areas vent to the outside.....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1d. Chemical products and supplies are stored in sealed containers, and clearly labeled .....              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1e. Supplies are used according to manufacturers' instructions .....                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1f. Chemicals wastes and containers are disposed of properly .....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1g. Schedule work involving odorous or hazardous materials for periods when the school is unoccupied ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1h. Ventilate affected areas during and after the use of odorous or hazardous materials .....              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1i. Replace portable gas cans with low-emission cans when feasible.....                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## 2. DUST CONTROL

- |   |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|
| 2a. Install and maintain floor mats for entrances when available .....                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2b. Use high efficiency vacuum cleaners and/or bags when available .....                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2c. Use damp cloth for dusting according to the maintenance schedule .....                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2d. Clean air return grilles and supply vents as needed or according to maintenance schedule..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## 3. FLOOR CLEANING

- |  |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|
| 3a. Schedule and perform regular vacuuming/mopping of floors ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3b. Clean spills on floors immediately .....                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3c. Perform restorative maintenance (as necessary) .....           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## 4. DRAIN TRAPS

- |   |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|
| 4a. Pour water down floor drains once per week (about 1 quart of water) ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4b. Run water in sinks at least once per week (about 2 cups of water).....    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4c. Flush toilets once each week (if not used regularly) .....                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**5. VENTILATION**

	Yes	No	N/A
5a. Room temperatures are moderate (generally 72° - 76°F) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5b. Manual timers are turned-on every morning .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5c. Automatic timers are set and working properly .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5d. Heating and ventilation filters are changed on a regular basis and documented .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5e. Ventilation units are free of bird/rodent nesting and fecal matter .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5f. Ventilation supply/return vents are unobstructed .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5g. Vehicles are not allowed to park near air intake vents.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5h. Fan and boiler rooms are generally clean and free of clutter .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5i. Trouble calls are placed and repairs completed for non-functioning ventilation units .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**6. MOISTURE, LEAKS, AND SPILLS**

6a. Site is free of mold or mildew-like odors .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6b. Inspect ceiling tiles, floors, and walls for leaks or water damage (discoloration may indicate periodic leaks) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6c. Windows, windowsills, and window frames are free of condensation .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6d. Indoor surfaces of exterior walls and cold water pipes are free of condensation .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**7. BUILDING AND GROUNDS EQUIPMENT**

7a. Equipment is free of odors.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7b. Appliances are inspected for back drafting.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7c. Equipment components are in good condition; hoses, cords, fittings and safety devices are free of leaks, disconnections, or deterioration (corrosion or soot).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7d. Gasoline and diesel powered equipment are stored in a secure area not occupied by students.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**8. PEST CONTROL**

8a. LAUSD <i>Integrated Pest Management Plan</i> protocols are in place and followed .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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**NOTES**