

INDOOR AIR QUALITY CHECKLIST – ANNUAL REVIEW

Name _____

Room or Area _____

School _____

Date Completed _____

Signature _____

The first part of this checklist discusses seven topic areas:

- General Cleanliness
- Animals in the Classroom
- Drain Traps
- Excess Moisture
- Thermal Comfort
- Ventilation
- Local Exhaust Fans

1. Place a YES, NO or NA in front of each question.
2. Use the back of this checklist for additional comments.
3. Return this checklist to your IAQ Coordinator.

1. General Cleanliness

- Is room dusted and vacuumed thoroughly and regularly?
- Is trash removed daily?
- Is food kept in room overnight? (This is prohibited by our IAQ Plan.)
- Do the students eat snacks in the room? (Our IAQ Plan allows this for elementary morning snack, and they must be of the dry type.)
- Is animal food (if any) stored in tightly sealed containers?
- Are there any signs of pests?
- Are scented cleaners used?
- Are spills cleaned promptly?

2. Animals in the Classroom

- Are animals kept caged?
- Are cages cleaned regularly?
- Are animals located away from ventilation system vents to avoid circulating allergens throughout the room or building?
- Is special care taken with asthmatic or other sensitive students and staff?

3. Drain Traps

- Are floor drains flushed with water once per week? (approx. 1 quart of water)
- Are sinks flushed with water at least once per week? (approx. 2 cups of water)

- Are toilets (if not frequently used) flushed weekly?

4. Excess Water in Classroom

Is water condensing on:

- Windows, windowsills or window frames?
- Cold water pipes?
- Indoor surfaces of exterior walls?

Are there leaks or signs of moisture:

- Around and under classroom sinks?
- In classroom lavatories?
- On ceiling tile or walls?

5. Thermal Comfort

- Is the temperature comfortable? (generally 70 - 75 degrees F.)
- Are there drafts?
- Is direct sunlight shining on students or staff?
- Is the humidity too high? (generally 30% - 60% is ideal.)

6. Ventilation

- Locate unit ventilator (if any).
- Is ventilator operating during school hours?
- Locate air supply and air return vents (if any).
- Is air supply diverted or obstructed by books, papers, furniture, curtains or other obstacles? (Never place anything on top of unit ventilators.)
- Are air filters changed regularly?

Check for unexplained odors

- Vehicle exhaust?
- Kitchen/food?
- “Chemical” smell?
- Mold or mildew?

7. Local Exhaust Fans and Fume Hoods (Art, Industrial Arts, Science & Food Services Only)

- Does the air flow when fans are on?
- Are fume hoods cracked, broken or pulling away from the ceiling or wall?
- Is the fan not in use because it is noisy?
- Are there any odors in adjacent rooms or halls?
- Are students and staff trained, who use the classroom or equipment, on when and how to use the fume hoods and fans?
- Are pollutant-generating activities conducted under the fume hood with the exhaust fan turned on?

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The second part of this checklist discusses six topic areas:

- Art Supplies
- Science Supplies
- Industrial/Vocational Educational Supplies
- Locker Rooms
- Printing/Duplicating Equipment
- Food Service

1. Fill out the section that pertains to your work area.
2. Place Yes, No or NA in front of each question.
3. Return this checklist to your IAQ Coordinator

1. Art Supplies

Art supplies may emit contaminants during use and storage. Are these supplies and activities used appropriately?

- Solvents
- Inks
- Adhesives and glues
- Wax
- Varnishes and lacquers
- Powdered pigments
- Acids
- Clays
- Paints
- Firing kilns

- Are appropriate procedures and supplies available for spill control?
- Are all hazardous supplies labeled with date of receipt/preparation and pertinent precautionary information?
- Are Material Safety Data Sheets available?
- Are supplies kept in tightly sealed containers?
- Are recommended procedures followed for disposal of used substances?
- Are storage areas separate from classroom and ventilated separately?
- Are less or nonhazardous materials used when possible?
- Are local exhaust fans used?
- Are contaminant producing activities or operations isolated?
- Are moist-premixed products used rather than powdered products?
- Are techniques used that require the least amount of materials?

2. Science Supplies

Science supplies that may contribute to IAQ problems are:

- Solvents
- Acids
- Flammables

- Caustics
- Biologics

- Are labels read and precautions identified regarding fumes or ventilation?
- Are Material Safety Data Sheets available?
- Are appropriate procedures developed and supplies available for spill control?
- Are all chemicals labeled accurately with date of receipt/preparation and pertinent precautionary information?
- Are supplies stored according to manufacturers' recommendations?
- Are recommended procedures followed for disposal of used substances?
- Are storage areas separate from main classroom area and ventilated separately?
- Are diluted substances rather than concentrates used wherever possible?
- Are techniques used that require the least quantity of hazardous materials?
- Do fume hoods capture respirable particles, gases and vapors released within them?
- Are exhaust fans operated properly?

3. Industrial/Vocational Educational Supplies

Examples of industrial and vocational educational materials and operations that can create IAQ problems:

- Machining
- Solvents
- Grinding
- Fuel
- Painting
- Soldering
- Welding
- Baking/Heating
- Adhesives

- Are labels read and precautions identified regarding fumes or ventilation?
- Are Material Safety Data Sheets available?
- Are appropriate procedures developed and supplies available for spill control?
- Are supplies stored according to manufacturers' recommendations?
- Are recommended procedures followed for disposal of used substances?
- Are compressed gas cylinders secured?
- Are storage areas separate from classroom area and ventilated separately?
- Are instructional techniques used that require the least quantity of hazardous materials?
- Do fume hoods capture all respirable particles, gases and vapors released within or under them?
- Are exhaust fans operating properly?

4. Locker Rooms

- Are chemical cleaners and disinfectants used only when areas are unoccupied?
- Are exhaust fans operating to remove moisture and odors?
- Are wet towels removed regularly?
- Are soiled practice uniforms washed and dried regularly?
- Are students encouraged to take soiled clothes home regularly?

5. Printing/Duplicating Equipment

- Does equipment leak?
- Are any odors detected?
- Is equipment regularly maintained?
- Are there any complaints from individuals who are exposed to the equipment?
- Is equipment located in a well ventilated area with sufficient outdoor air?
- Are spirit duplicating equipment and diazo dyeline copiers (if any) located in a separate room with a fan to exhaust air to the outside?

6. Food Service

Local Exhaust Fans

- Does air flow when fans are on?
- Are cooking odors or smoke detected in areas outside the kitchen area?
- Is fan excessively noisy?
- Does staff understand the importance of using the fans to prevent moisture accumulation and the spread of food odors?
- Are staff trained to use fans when cooking, dishwashing or cleaning?
- Is the use of fans monitored from time to time throughout the year?

Gas Appliances

- Are gas appliances vented outdoors?
- Are combustion gas odors, headaches when gas appliances are in use or natural gas odors detected at any time?

Kitchen Cleaning

- Is kitchen inspected for signs of microbiological growth?
- Are hard-to-reach places, such as upper walls and ceilings checked for evidence of mold growth?
- Are affected areas cleaned as needed?
- Are biocides (if used) selected only from products registered by EPA for such use?

Plumbing Leaks

- Are sink faucets and area under sinks checked for plumbing leaks?
- Is area checked for stains or discoloration and/or damp or wet areas?

Food Handling or Storage

- Is area checked for dead insects or rodents?
- Is area checked for insect or vermin feces?
- Are food handling and storage practices reviewed regularly?
- Are food scraps disposed of properly and crumbs removed?
- Are counters wiped clean with soap and water or a disinfectant?
- Are floors swept and damp mopped to remove food?
- Are stoves and ovens cleaned after use?

Waste Management

- Do waste containers have lids that close securely?
- Is food waste and food contaminated waste separated from other wastes?

Receiving

- Is a sign posted to keep vehicles from idling their engines in receiving area?
- Are drivers asked to turn off their engines if they don't follow instructions on the sign?

Thank you for taking the time to fill out this checklist. These checklists will be reviewed by the Safety Committee to determine what the District's IAQ scope will be over the next several years. If you have any personal concerns that you would like to express relative to the school environment and it's Indoor Air Quality, please respond on the back of this checklist.

INDOOR AIR QUALITY FACT SHEET

The goal of the **Annual Review Checklist** is to provide the Safety Committee with building information and concerns with IAQ. They will be using this information to review the District's IAQ program and determine what improvements need to be addressed. The checklist will also provide you with clear and easily applied activities that you can use to help prevent indoor air quality problems and resolve any problems promptly if they do arise. Once you understand the basic principles and factors that influence indoor air quality in your school, you will note that specific activities involve two major actions: the management of pollutant sources and the use of ventilation for pollutant control. This guidance is based on the following principles:

- ◆ Many IAQ problems can be prevented by school staff and students.
- ◆ When IAQ problems do arise, they can often be resolved using the skills of school staff.
- ◆ The expense and effort required to prevent most IAQ problems is much less than the expense and effort required to resolve problems after they develop.

Why IAQ is Important to Your School

Good indoor air quality contributes to a favorable learning environment for students, productivity for teachers and staff and a sense of comfort, health and well being for all school occupants. These combine to assist the District in its core mission – educating children.

Failure to prevent indoor air problems, or failure to respond promptly, can have consequences such as:

- ◆ increasing the potential for long term and short term health problems for students and staff;
- ◆ impacting the student learning environment, comfort and attendance;
- ◆ reducing productivity of teachers and staff due to discomfort, sickness or absenteeism;
- ◆ accelerating deterioration and reducing efficiency of the school physical plant and equipment;
- ◆ increasing the potential that schools will have to be closed, or occupants temporarily relocated;

- ◆ straining relationships among school administration and parents and staff;
- ◆ creating negative publicity that could damage a school's or administration's image and effectiveness;
- ◆ creating potential liability problems.

Indoor air problems can be subtle and do not always produce easily recognized impacts on health, well being or the physical plant. Children may be especially susceptible to air pollution. For this and the reasons noted above, air quality in schools is of particular concern – proper maintenance of indoor air is more than a “quality” issue, it encompasses safety and stewardship of our investment in the students, staff and facilities.

Six Basic Control Strategies

There are six basic control methods for lowering concentrations of indoor air pollutants. Specific applications of these basic control strategies are noted in your Checklists.

Source Management includes removal, source substitution and source encapsulation. Source management is the most effective control method when it can be practically applied. Source removal is very effective. However, policies and actions that keep potential pollutants from entering the school are even better at preventing IAQ problems. Examples of **source removal** include banning pets in classrooms, not placing garbage in rooms with Heating, Ventilation and Air Conditioning (HVAC) equipment and banning smoking within the school. **Source substitution** includes actions such as selecting a less toxic art material or interior paint than the products which are currently in use. **Source encapsulation** involves placing a barrier around the source so that it releases fewer pollutants into the indoor air (e.g., asbestos abatement, pressed wood cabinetry with sealed or laminated surfaces).

Local Exhaust is very effective in removing point sources of pollutants before they can disperse into the indoor air by exhausting the contaminated air outside. Well known examples include restrooms and kitchens where local exhaust is used. Other examples of pollutants that originate at specific points and that can be easily exhausted include science lab and housekeeping storage rooms, printing and duplicating rooms and vocational/industrial areas such as welding booths.

Ventilation through use of cleaner (outdoor) air to dilute the polluted (indoor) air that people are breathing. Generally, local building codes specify the quantity (and sometimes quality) of outdoor air that must be continuously supplied to an occupied area. For situations such as painting, pesticide application or chemical spills, temporarily increasing the ventilation can be useful in diluting the concentration of noxious fumes in the air.

Exposure Control includes adjusting the time of use and location of use. An example of time of use would be to strip and wax floors on Friday after school is dismissed, so that the floor products have a chance to off-gas over the weekend, reducing the level of odors or contaminants in the air when the school is occupied. Location of use deals with moving the contaminating source as far as possible from occupants, or relocating susceptible occupants.

Air Cleaning primarily involves the filtration of particles from the air as the air passes through the ventilation equipment. Gaseous contaminants can also be removed, but in most cases this type of system should be engineered on a case-by-case basis.

Education of the school occupants regarding IAQ is critical. If people are provided information about the sources and effects of contaminants under their control, and about the proper operation of the ventilation system, they will better understand their indoor environment and can act to reduce their personal exposure.

Your Role in the IAQ Team

As one of the people in your school, your activities and decisions have an impact on the quality of the indoor air in your school. You can participate by applying the activities noted in your Checklist, and by continuing to apply these principles on a daily basis. The District's IAQ Coordinator, who serves as a focal point for collecting IAQ information and handling IAQ concerns.

How Do You Know If You Have An IAQ Problem

Diagnosing symptoms that relate to IAQ can be tricky. Acute (short-term) symptoms of IAQ problems typically are similar to those from colds, allergies, fatigue or the flu. There are clues that can serve as an indicator of a potential indoor air problem:

- ◆ the symptoms are widespread within a class or within a school;
- ◆ the symptoms disappear when the students or staff leave the school building for a day;

- ◆ the onset is sudden after some changes at school, such as painting or pesticide application;
- ◆ persons with allergies, asthma or chemical sensitivities have reactions indoors but not outdoors;
- ◆ a doctor has found that a student or staff member has an indoor air-related illness.

However, a lack of symptoms does not ensure that IAQ is acceptable. Symptoms from long-term health effects often do not become evident for many years. If you have concerns, please let us know what they are.

What If You Think You Have An IAQ Problem

If you receive complaints that seem to indicate a potential IAQ problem and the problem is self-evident, then attempt to correct the problem. If the problem cannot be corrected, or if the complaint seems to indicate a potentially severe IAQ problem, contact the IAQ Coordinator immediately and file an IAQ Complaint Form. The IAQ Coordinator may ask you questions to try to identify whether you have overlooked potential causes of the problem (such as, "Has anything changed since the last time you completed your checklist?"), and then may call in other help from within or outside the school to investigate further.

Communication

Because indoor air problems can jeopardize the health of students and staff, parents and the public may react strongly to reports of bad indoor air quality in your school. With this in mind, it is recommended that you follow the communications guidelines established by the IAQ Coordinator. This will involve referring questions from the public and media to one central source, the Superintendent. In this way, parents, staff and the public will not become alarmed by conflicting or wrong information, and will have a consistent and complete source of information regarding the quality of the indoor air in your school.

Information supplied on this fact sheet has been taken from the District IAQ Plan and from the U.S. EPA's "Tools for School" program.

For further information or questions regarding IAQ, please contact the IAQ Coordinator.