

Teacher Guide

Student Air Quality Investigator Classroom Checklist

About the Activity

The **Air Quality Ambassador Classroom Checklist** gives students an opportunity to become “air quality detectives” in their own classroom. Students look for everyday conditions that can affect indoor air quality, document what they notice, and identify simple actions they can take or report to an adult.

The activity is designed for **grades 5–12** and can be completed individually, in pairs, or as a small group.

Learning Goals

After completing the activity, students should be able to:

- Identify common factors that can affect indoor air quality in classrooms.
- Recognize conditions that help keep classroom air clean and comfortable.
- Distinguish between a problem they can address themselves and one that should be reported to an adult.
- Document observations and think about possible solutions.
- Understand that maintaining good indoor air quality is a shared responsibility.

Before the Activity

1. Choose a classroom and timing

The activity can be completed in the students' own classroom or another designated space. Allow approximately **15–20 minutes** for the inspection and discussion.

For the best results, complete the checklist during a typical class period when the room is occupied and operating normally.

2. Review the checklist

Before beginning, quickly review the items with students. Explain that they are looking for things they can see, smell, or observe—they are not expected to diagnose building problems.

Remind students: Your job is to notice and report—not to fix or investigate anything that could be unsafe.

If students see a leak, suspected mold, chemical spill, damaged equipment, or another potentially unsafe condition, they should tell their teacher or designated staff member.

3. Gather materials

Students will need:

- Air Quality Ambassador Classroom Checklist
- Pencil or pen

How to Do the Activity

Step 1: Look around

Students slowly walk around the classroom and observe each item on the checklist.

For each item, they select:

Good — everything looks as it should

Needs Attention — something could be improved

Not Sure — they need help from an adult

Encourage students to look **up, down, and around** the room. For example, they might check ceilings for water stains, look under sinks for leaks, or look behind furniture to see whether vents are blocked.

Step 2: Record what you notice

Students should add a short note when they mark something **Needs Attention** or **Not Sure**. For example:

- “Backpacks are blocking the air vent.”
- “There is a water stain on the ceiling.”
- “There is a strong air freshener smell.”
- “The air cleaner is turned off.”
- “The room feels stuffy.”

Step 3: Identify a problem and think about solutions (Optional extension)

For older students or a follow-up activity, ask students to choose one issue they identified and develop a simple “**problem** → **possible cause** → **solution**” proposal.

For example:

Problem: Backpacks are blocking the air vent.

Possible cause: There is limited storage space near the entrance.

Possible solution: Move backpacks to a designated storage area.

Who can help? Students and teacher.

This can help students see that improving indoor air quality isn't just about finding problems—it is about **observing, communicating, and working together to find solutions.**

Step 4: Share

End with a short class discussion asking:

- What things did you find that could be impacting our indoor air quality?
- Did anything surprise you?
- What do you think students can do to help protect indoor air quality?
- Which problems require help from teachers, custodians, or facilities staff?
- What is one thing we can do differently starting today?

Why Is Each Item on the Checklist?

The checklist focuses on things that students can observe and that may contribute to a clean, healthy, and comfortable classroom environment.

Doors and Windows

Propping open windows and doors can bring in unwanted air pollutants into the classroom like pollen, fine particulate matter, and mold spores. Opening windows and doors can also waste energy and be a security concern. Whether they should be open or closed depends on the school's ventilation system, weather, and district procedures. Students and staff should follow guidance from Facilities rather than deciding on their own.

Clear Air Vents and Returns

Furniture, backpacks, books, and clutter on vents blocks the movement of air. Keeping vents and return grilles clear helps the classroom's ventilation system work as intended.

Clean, Dust-Free Surfaces

Dust can contain allergens and increase asthma symptoms. Regular cleaning helps reduce the amount of dust that can become airborne.

Water Leaks, Dampness, and Mold

Water and moisture can damage building materials and create conditions that support mold growth. Staff and students should report leaks, water stains, damp materials, or suspected mold to Facilities immediately rather than attempting to clean or remove them.

Strong or Unusual Odors

Unusual smells can be a serious sign that the HVAC system isn't working properly, potential mold, or there could be chemical exposure risk. Report strong or persistent odors promptly.

Scented Products

Air fresheners, plug-ins, sprays, and other strongly scented products can add chemicals to indoor air and can trigger asthma symptoms.

Food and Trash

Food left out or improperly stored can attract pests and create odors. Keeping food in hard-sided containers with lids and cleaning up food waste helps prevent pests.

Classroom Pets

Animal habitats can produce dust, allergens, and odors. Keeping cages and tanks clean helps maintain a healthier classroom environment.

Portable Air Cleaners

Portable air cleaners can help remove tiny particles from indoor air including airborne viruses and allergens.. Students can check whether the unit is operating and whether its air intake and exhaust are unobstructed. Students should not move, unplug, or change the settings on the unit unless instructed to do so.

Chemicals and Classroom Supplies

Cleaning products, art supplies, science materials can release chemicals that negatively impact health. Use only district-provided, safer cleaning products and ensure that supplies are properly stored in undamaged containers.

Temperature and Humidity

A classroom that is unusually hot, cold, humid, dry, or stuffy can impact learning and can sometimes indicate a ventilation or building issue. Students can report what they experience without needing to determine the cause.

A Note About Student Safety

Students are observers and ambassadors—not building inspectors.

Students should not:

- Touch or investigate suspected mold.
- Touch leaks, wet materials, or damaged building materials.
- Adjust thermostats or HVAC controls unless specifically instructed.
- Move or unplug air cleaners.
- Handle cleaning chemicals.
- Open chemical containers to identify an odor.
- Climb on furniture or equipment to inspect hard-to-reach areas.

If something looks unsafe or unusual, **stop and tell an adult.**