



Healthy Homes

Post-assessment activity from *The Science of Air Teacher's Guide* and for *Mr. Slaptail's Secret*

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BioEdSM

Teacher Resources from the
Center for Educational Outreach at
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The activities described in this book are intended for school-age children under direct supervision of adults. The authors and Baylor College of Medicine cannot be responsible for any accidents or injuries that may result from conduct of the activities, from not specifically following directions, or from ignoring cautions contained in the text.

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Healthy Homes

Post-assessment

CONCEPTS

We are able to influence many aspects of indoor air quality.

OVERVIEW

Students will identify potential indoor air hazards at home and discuss ways they can be decreased or eliminated.

SCIENCE, HEALTH & MATH SKILLS

- Observing
- Recording observations
- Drawing conclusions
- Applying prior knowledge to a new situation

TIME

Preparation: 10 minutes

Class: 30 minutes for introduction of activity; 30 minutes to discuss students' observations and draw conclusions

MATERIALS

Teacher (see Setup):

- Overhead projector
- Transparency of student sheet

Each student will need:

- Copy of the pre-assessment he or she completed at the beginning of the unit
- Copy of "Healthy Home Survey" student sheet

We tend to forget that environmental problems are not restricted to outside habitats (natural or urban). Most people's homes, offices and schools are the "environments" in which we spend most of the day and night. Since we spend so much time inside, the quality of our indoor environments is very important.



Unit Links

Mr. Slaptail's Secret

Science boxes,
pp. 28–29

Explorations

Worldly Words, p. 5

Indoor air can be polluted by many sources. Some indoor air pollutants are so irritating that they can bother anyone who breathes them. These include paints, asbestos fibers, smoke, cleaners, insect sprays and chemicals used on fabrics. Other pollutants can cause more problems for some people than for others. For example, some people are allergic to dust. When they breathe dusty air, people with dust allergies may start to sneeze, or experience runny noses and itchy eyes. Once

in a while, dusty air can cause serious breathing problems, such as those associated with asthma.

How can we keep the air inside our homes and other buildings clean and safe to breathe? A little common sense goes a long way. We can be careful about using chemical cleaners, paints, glues and pesticides. Even better, we can use products that don't pollute. We can reduce the amount of dust in the air by regularly changing the filters in our home heating and cooling systems. We can eliminate some sources of indoor air pollution, such as tobacco smoke, completely.

SETUP

This activity should be introduced and summarized as a whole-class discussion. Students will work individually as they conduct their home air surveys.

PROCEDURE

Part 1. Getting started

1. Ask students to mention some things they have learned about indoor air. If you have used the Air unit's *Explorations* magazine and/or read the story, *Mr. Slaptail's Secret*, one or the other might serve as a basis for beginning a discussion. Otherwise, initiate a class review of different sources of indoor air pollution.
2. Mention that we can do many things to improve the quality of the air we breathe at home. Stress that before trying to solve problems of this type, we must look for possible sources of indoor air pollution. After those sources are identified, we can



- decide which actions are needed to make improvements.
3. Give each student a copy of the “Healthy Home Survey” student page. Ask students to take their pages home and use them to conduct a survey of possible air pollutants inside their homes. Stress that an older family member or friend should help them conduct the survey. Students should circle or color different areas on their sheets in which they have found potential sources of indoor air pollution. Encourage them to draw any additional pollutants that they encounter during their surveys.

Part 2. Looking at results

1. Invite students to share their survey results with the class. Create a list on the board of different home air quality hazards identified, or make a transparency of the “Healthy Home Survey” sheet and make annotations while you project it as an overhead.
2. After the list is complete, have students suggest ways in which hazards can be decreased or eliminated. Do this as a whole-class discussion, or ask each student to write a paragraph about ways to improve indoor air quality.
3. Refer students to pages 28–29 of *Mr. Slaptail’s Secret*. Ask them to find the different ways Mr. Slaptail’s neighbors were able to eliminate air pollution inside his house.
4. Display the students’ surveys.

Part 3. Post-assessment

1. Hand out students’ pre-assessments, completed at the beginning of the unit. Ask students if there are any questions that they would answer differently now.
2. Have students use a different color ink to circle any new responses. On a separate sheet of paper, have students explain the reasoning behind their changes. Discuss students’ new responses as a group.

VARIATIONS

- Conduct a “Healthy Home Survey” in your school building. Have students work in teams of 2–4 and assign teams to different parts of the building. Bring the class together to discuss students’ observations and make a list of possible improvements. Be sure to identify measures already being taken to maintain a clean indoor environment in the building.

REDUCING INDOOR AIR POLLUTION



- Remove unnecessary “dust catchers,” such as curtains.
- Store little-used things in plastic bags.
- Clean or change filters in heating and cooling systems frequently.
- Wash bedding in hot (at least 130° F) water to kill dust mites.
- Keep living and storage areas dry and well-ventilated.
- Store food leftovers in sealed containers to discourage cockroaches and other insects.
- Remove dust deposits with a damp sponge or cloth—especially when renovating.
- Ensure adequate ventilation when using products containing chemicals, such as those found in personal care or cleaning products.



Healthy Home Survey

Encuesta de Casas Saludables

