Air Sampling

After watching the program, you may wonder what kind of particles are in the air you breathe in your school, at home, or outdoors. This activity will give you a chance to investigate some of the material in the air you breathe every day.

Materials

- a glass jar with a wide opening (such as a mayonnaise or jelly jar)
- petroleum jelly
- cotton swabs
- masking tape
- permanent markers
- map of the school grounds (can be drawn by a student)
- hand-held lenses or microscopes
- transparent tape
- · camera (optional)

Procedure

1 Using cotton swabs, spread petroleum jelly on the entire inside surface of the jar. You don't need a lot—just enough to make the surface of the glass sticky. This is your testing device. Particles in the air will stick to the petroleum jelly and you can observe them later. Using a permanent marker on strips of masking tape, write your name and the date and put the label on the outside of your jar.

2 With your partner, choose a location inside the school or outdoors to collect your sample. You will need to leave your jar in the same spot for at least a week, so select a spot that will not be disturbed. In your classroom, mark the location of your jars on a map of the school grounds.

3 Place your jar in the selected spot. If you are using a camera to document your experiment, take a picture of the starting phase. You may want to leave a note explaining the experiment and asking that the jar not be disturbed.

4 During the next week, visit your jar several times. Keep track of the weather and wind patterns that occur each day. Take notes, make sketches, or take photographs to show the changes to the inside of the jar.

5 After a week, bring your jar back to class. Use a hand-held lens to inspect the particles stuck to the glass. If you have microscopes available, you can collect samples from your jar by pressing transparent tape against the particles, then placing the tape on a microscope slide. Try to identify the particles.



6 Compare your findings with the findings of other people in your class. What are the differences between the indoor and outdoor air samples? Which location had the most airborne particles? Which had the least? What are possible explanations for your class results?

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