



Clean Air

Grade Levels: 4-6

Background

More than 60% of a school's energy bill is spent on heating, cooling, and ventilating buildings to keep the air safe to breath and the right temperature.

Question

Does indoor or outdoor air have more particles?

Possible Hypothesis

_____ air has more particles.

Materials

- 14 White index cards
- Petroleum jelly
- Cotton swabs
- Magnifying glass

Procedure

1. Label the index cards I-1 to I-7 and O-1 to O-7. (I is for "Inside" and O is for "Outside".)
2. Smear petroleum jelly on cards I-1 and O-1 using a cotton swab and tape them to the same window: I-1 on the inside and O-1 on the outside. Avoid placing the cards near a door.
3. After 24 hours, take the cards down and repeat the procedure with the cards labeled I-2 and O-2 cards. Make a note of the weather each day, and what you see happening to the petroleum jelly.
4. Do this for a week, replacing the cards each day. Examine the cards closely and compare them to each other and to previous sets.
5. Record your observations, noting any differences.
6. Repeat the experiment in a different location or at a different time of year.

Analysis and Conclusion

How does the air inside and outside compare? How does it compare in different weather, different locations, and in different seasons? How clean would you say the air is in your neighborhood?

