



Prove It! Facts About Air

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Summary:

Guide students through experiments that will help them understand what air is, where it is, and how we know. Students can contribute to a group writing experience to summarize what they've proven about air.

Objectives:

- Students will participate in several simple science experiments that will help them discover facts about air.
- Students will help the teacher write an informative text to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content. (W.2)

Context:

This lesson could be used during the study of science and writing. It is appropriate for primary grade students but could be adapted for all elementary-aged children.

Materials:

- Copy of *Air is All Around You* or *I Face the Wind*
- Equipment to conduct experiments described in the books

Time Span:

The material can be presented in 1–2 half-hour sessions depending on the number of experiments the teacher wishes to include.

Procedures:

1. Ask students to tell you what they know about air—what is it? Where is it? Why do we need it? How do you know these things? Can you show me or prove it?
2. Tell students that all living things need air to live. Ask students to breathe in and hold their breath. Have them hold their hands in front of their faces as they blow the air out—can they



- feel anything? Why does it get uncomfortable if you hold your breath for very long? Do you get dizzy if you hold your breath?
3. How do scientists know that air is all around us? Using a book, fan the air towards the students. Can they feel the air moving? Can they see evidence that the air is moving? Can they make air move in the room? How do we know there is air outside? Can we see it? (suggest wind blowing trees or clouds)
 4. Read one of the texts listed above to students, stopping to discuss and try the experiments.
 5. After you have read the text and tried some of the experiments, ask students to imagine that someone from a different planet came to our class and didn't believe that air was real. What could they say to help the alien understand what air is?
 6. Write students' statements so all can see. If time and attention spans allow, you can edit the statements to clarify and organize the information.

Extensions:

The simple experiments could be placed in centers or stations for students to duplicate in small groups. Students can fold a simple fan or paper airplane to experiment with moving air in the classroom. Have them write step-by-step instructions for how to fold the fan or airplane.

Rationale:

Students will begin to see that scientific information can be proven through experimentation. They will contribute to a summary of some information they discover about air to help clarify the facts and organize their thinking.

Resources:

Branley, Franklyn. *Air is All Around You*. Harper Collins, 2006.

Cobb, Vicki. *I Face the Wind*. HarperCollins, 2003.

Madgwick, Wendy. *Up In the Air*. Anness Publishing, Ltd. 2014