

## Learning Goals

- Explain that air takes up space and is all around us
- Define wind as moving air
- Discuss how plants, animals, and people need clean air to breathe

## Video Summary

### Exploration Segment

Where is air? Children discover that air is inside lots of objects. We can pump air into things and squeeze it out. Air also surrounds us.

### Concept Development Segment

Moving air is wind. We can't see air, but we can see how it blows things. All living things need air. People, animals, and even plants breathe in air. People use air in many ways. The hostess presents a poem about where we find air.

### Application Segment

Some children and their teacher work with a jar and water to discover that air takes up space. "You Try It" challenges children to discover how wind chimes work, and to make their own chimes.

## Key Words

|       |   |
|-------|---|
| air   | the invisible mixture of odorless, tasteless gases that surrounds the earth |
| gill  | an organ that some animals have for taking in oxygen from water             |
| space | part of a distance, area, or volume that can be measured                    |

## Let's Do It

- Ask students, *Where is air?* Introduce air as what we breathe in and out and what moves things in the wind. Encourage children to look around the classroom for examples of air at work and list their findings on a chalkboard.
- Tell students: *Watch this video to see what you can learn about air.*
- Begin the tape. Stop/pause it after viewers see a variety of places where air can be found. Ask students to answer the hostess's question: "How do you know air is there?" Help students remember the examples they just saw in the video and discuss what evidence of air there was. When finished with the activity, watch the rest of the video.

## You Try It

**What makes a wind chime work?** Provide several sets of chimes so students can work in groups to examine them. Encourage children to hang the chimes from their hands and explore the parts that make noise. Ask them to think about where chimes are normally hung and what might make the chimes move in those locations. (Wind or other drafts blow the chimes and make them hit one another, producing sounds.) Now distribute string and a variety of metal objects, such as forks, spoons, hangers, jewelry, washers, nuts, etc. and challenge children to create their own wind chimes.

## More Exploring

**Explore air.** Repeat the exploration shown in the video: Ask a child to crumple a piece of paper, put it in an "empty" jar, and screw on the lid. Turn the jar over and put it underwater, then remove the lid. Ask, *What happened to the paper?* Now have the child tilt the jar so that bubbles emerge. Again ask, *What happened to the paper?* Have children explain what was in the "empty" jar. (air)

**There's air in there.** Give children a variety of empty plastic squeeze bottles, or plastic squeeze toys that whistle when squeezed. Have children hold the objects so that the air valves are just above their hands, then have them squeeze the bottles or toys. Ask, *What do you feel? What was inside the bottle or toys?*



**Explore wind.** Ask children to define wind (air that moves).

Demonstrate how a wind vane and anemometer work, then help children use the instruments to learn wind direction and relative speed (substitute a toy pinwheel for an anemometer; attach a piece of string to one vane of the pinwheel so children can count the number of times the string passes by in one minute). Repeat the measurements over several days and compare.

**Make a class air calendar for the month.** Help students pick several distant landmarks that can be seen through a classroom window, and each day, ask children to observe how well each landmark can be seen. Have students use symbols or colors to record their observations on the calendar. Discuss what might be happening if the

landmarks become difficult to see (smog, fog, clouds, rain). How does it feel to breathe during days when this happens?

**Make a mural of moving air.** Have students cut magazine pictures or make drawings of ways we see moving air.

**Go on a wind walk around the school** and use a camera to record the observations children make about where they see moving air. Put the photographs into a "wind album." Add stories that children write about wind.

**What does wind do to us?** Have students pretend that there is a very hard wind blowing. Have them take turns acting out how the wind would affect them if they were wearing hats, trying to walk or swing, or doing other things. Discuss what a hard wind would be like in cold weather and what hot weather would be like without wind.

**Art—Discuss how mobiles move when there is wind** or an indoor draft of air. Make mobiles from a variety of materials and hang them around the school so that everyone can observe the movements of air.

**Read the following poem** (presented in the video), then ask students to answer the questions below.

*Where Is Air?*

Where is air?  
Is it right up there?  
Is it down below?  
Is it everywhere you go?

Where is air?  
Is it where you sleep?  
Is it where you play?  
Is it with you night and day?

Where is air?  
Is it with birds and bees?  
Walruses and fleas?  
Flowers and trees?

Where is air?  
It's everywhere!

- *Where can you see air at work?* (Refer students to the list they made before viewing the video. Ask them to add more places that show evidence of air or wind.)
- *Which animals and plants need air?*
- *What would we do if we didn't have air?*