

# INV. 1 ACTIVITY—AIR TAKES UP SPACE

## Introduction

If your child was learning in school, they would have started by studying the properties of air. You will do two explorations that will help your students realize one major property of air.

## Materials

- A plastic zip bag, if you do not have a zip bag, any bag will do
- Small piece of paper towel or paper napkin
- A small glass, plastic cup or narrow jar
- Clear basin or large glass bowl filled with water (ideally something you can see through)

## Activity

### Focus question: What are some properties of air?

Hold up a slightly opened zip bag and ask your child if there is anything in the bag. They will likely say that it is empty. Seal most of the bag shut, leaving a little slit unzipped. Blow air into the bag and then seal it, and hand it to your child.

Ask them to gently push on it. Ask them what they notice. After they share some of their observations and questions, explain that they cannot squish the bag flat because there is air in it. Explain that air takes up space.

Let's look at this another way. Take a clear small glass or clear container, and ask if there is anything in it. Now put a crumpled up piece of paper napkin or paper towel in it on the bottom (you may need to tape it to keep the paper towel from falling out when upside down). Turn it upside down and push it straight down into a large container of water. Observe what happens.

Ask,

- What is in the glass now?
- Is there air in the glass? How do you know?

Then lift it straight out, still upside down.

- Is the paper towel wet?
- What caused the paper towel to stay dry?

Draw a picture, or a model, of what is going on here. Let this picture, this model, help explain your thinking.

Do this again, and this time, tilt the glass a little bit at a time.

- What happens?
- Where do the bubbles come from?
- What escapes from the glass? What takes its place as the air escapes?

Answer the focus question. You may want to use this sentence frame:

"One of the properties of air is \_\_\_\_\_ .

I also noticed that \_\_\_\_\_ ."

