

# Big Lab Post-Visit Activity

## Mini Air Blaster

In the Big Lab, you were able to explore with air and using it to make things move! Now, we're going to use what you learned to construct a mini Air Blaster that works like the AirZooka you saw in the Big Lab.

## Materials

### For Air Blaster

- Paper cup
- Paper, plastic wrap, tissue paper, etc.
- Rubber band
- Scissors

### For Recording Data

- Ruler and String (or Measuring tape)
- Paper

You have learned that air has mass and that it moves from areas of high pressure to low pressure. Because of this, we are able to move it from one place to another. The mini Air Blaster that you will create moves the air from inside the cup to outside. When you tap on the plastic or paper, the air inside the cup is forced into less space and, for an instant is under high pressure. Since air moves from high pressure areas to low pressure areas, a puff of air escapes out the hole in the bottom of the cup.

## Steps

1. Cut a hole in the bottom of your cup. You can experiment with the size of the hole that works the best.
2. Stretch a piece of plastic or paper over the top of the cup. This needs to be pulled tightly.
3. Use a rubber band to hold the plastic/paper on the cup. You might ask a friend to help you hold the plastic.
4. Point the bottom of the cup towards your face and tap the plastic. You should feel a puff of air hit your face. If your Air Blaster is not working, check that no air is escaping from the sides of the plastic.
5. With a partner, measure how far back the air will shoot. Tape a piece of paper to your desk and shoot the Air Blaster at the paper. How far back do you have to go before the air stops hitting the paper? Use the string to mark how far back you are and the ruler to get a measurement. Record your distance.
6. Try using a different type of material on the mini Air Blaster, OR change the size of the hole in the bottom of the cup. How does this affect the distance the air travels?

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**Air Blaster Data Recording Sheet**

Size of the Hole in Cup (inches/centimeters)	Material Used on Top of Cup	Distance Air Traveled

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### Things to Think About:

1. Did a bigger or smaller hole work better on your Air Blaster? Why?

2. Which material worked best? What happened with the other materials?

3. What could you use to make a bigger Air Blaster?