



## SPRING | Air Weather: What Do You Know?

### Summary:

A barometer helps us measure the weight of the atmosphere and predict the weather. Your gardener will learn how to make their own barometer and use it to measure, predict, and graph changing weather conditions in your garden.

### Before Visiting the Garden:

**Gather:** Wide-mouth glass jar without a lid, deflated balloon, rubber bands, two plastic drinking straws, clear tape, cardstock or poster board, pencil, and scissors

**Explore:** Google images of the Goethe Barometer—a very early example of the barometer

**Read:** *The Kids' Book of Weather Forecasting* with meteorologist Mark Breen & Kathleen Friestad

### In the Garden:

Meteorologists are scientists who study and forecast the weather. One way that meteorologists predict the weather is by reading a barometer. A barometer measures atmospheric pressure—how heavy the air is. As thoughtful gardeners, we can use this information to help us prepare our gardens for the many changing weather conditions in spring.

### Questions to Explore:

- Have you ever felt a weather change before you've seen it?
- Do you notice a difference in the air when rain is coming?
- What other ways could we predict the weather besides using a barometer?
- How can we use the information we learned from the barometer to prepare our gardens during different weather conditions?

### Activity:

Let's make our own barometer!

1. Help your gardener carefully cut off the neck of the deflated balloon, making a straight cut halfway down the balloon.
2. Stretch the balloon tightly over the top of the glass jar and stretch the rubber band around the neck of the jar to keep it airtight.
3. Trim the plastic straw so it is about six or seven inches long and cut the tips at an angle on each end so they have a point.
4. Tape one end of the straw to the top of the jar on the balloon in the center. (You can also use adhesive to strengthen the bond.)
5. Insert the second straw into the first to create a long, sturdy pointer.
6. In the center of your cardstock, draw a line. Mark the top of the paper as high pressure and the bottom as low pressure.
7. Fold your cardstock in thirds to create a triangular base, taping it so that it stands securely.

Place your barometer in the center of the garden with the pointer straw lined up with your high/low pressure chart. On a sunny day, the barometer will measure a high-pressure system with the straw pointing up. On a rainy day, the barometer will measure a low-pressure system with the straw pointing down. After you leave the garden, place your barometer on a shelf in your house. Spend the next week charting any weather changes you notice. Check the accuracy of your observations with your local weather service. Can you plot the high and low-pressure systems on a graph?

### Beyond the Garden | Get to Know Your Local Meteorologist

Visit a local museum that includes a weather exhibit. Talk to museum workers about some of the ways that other meteorologists predict the weather. If there is not a museum exhibit available, ask to visit a local news station and talk with the weathermen and women about their experiences forecasting the weather. How do they use the information they've learned from the weather to plan and prep their gardens?

### Continue Exploring | Supporting Materials

Young Meteorologist resources: <http://youngmeteorologist.org/>