

SUGGESTED ACTIVITIES

(Weather and Climate)

From *Discovery Website*

<u>Activity</u>	<u>Concept</u>
It's the Humidity	Humidity Affects Climate
Capture the Wind	Winds affect Climate
Sea Change	Proximity to water affects climate

It's the Humidity From

<http://school.discovery.com/curriculumcenter/weather/activity1.htm>

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Background:

You can tell how humid it is by looking at pinecones. In dry air, pinecones open their scales to disperse seeds. In dampness and rain, they close them to protect the seeds. In this activity, you will use pinecones to create a hygrometer, a device that measures the moisture content of the air.

Materials:

- Spray bottles
- Water
- Masking tape
- Box of toothpicks
- Small lumps of plasticine
- Pinecones (4 per group); preferably with scales that are open, long, and relatively lightweight (These cones are more sensitive to humidity than heavy, closed, and woody cones.)
- Wide-mouth jars with lids (4 per group); the jars must be taller than the pinecones.

Procedure:

1. Divide your lump of plasticine into four pieces; put one piece in each jar. Attach the base of a pinecone to the plasticine at the bottom of the jar.
2. Use the spray bottle to mist the pinecones inside the jars. Screw the lids on tight, and turn the jars upside down. Monitor the pinecones for the next several hours, writing your observations on the [worksheet](#).
3. Once the cone has closed, open the jar. Leave all the jars open over night. The next morning, record your findings on the worksheet.
4. When the cones are dry, fill one jar cap with water. Turn the jar upside down and screw it onto the lid. Be sure the cone does not touch the water. Leaving the other jar cap dry, screw it on the jar. Seal both with tape. These two jars serve as the control. Place them in a cool, dark place.
5. Repeat Step 4 with the remaining cones, but place both jars in a sunny window. Observe and compare them to the controls for the next four hours, recording your observations on the worksheet.
6. Can you find any other plants that respond clearly to changes in humidity? List them on the worksheet.

Capture the Wind From

<http://school.discovery.com/curriculumcenter/weather/activity2.html>

Background:

The Beaufort wind scale uses visual clues to estimate the speed of the wind. These descriptions—calm, gentle breeze, strong gale, hurricane—are often given in weather forecasts. Actual wind speed is measured with an anemometer, which measures wind speed in number of revolutions per minute. In this activity, you'll build a simple anemometer and measure wind speeds. You'll also use the Beaufort wind scale to describe the wind speeds you measure.

Materials:

- 4 plastic drinking straws
- Tape
- Four small paper cups (such as those in bathroom dispensers)
- One straight pin
- One pencil with an eraser
- Beaufort wind scale (included below)

Procedure:

1. Arrange the four plastic drinking straws to form a cross. Then tape the straws together where they meet at the center of the cross.
2. Tape one drinking cup to the end of each straw, making sure that the bottoms of the cups face the direction that your anemometer will rotate.
3. Push a straight pin through the center of the straws into an eraser on the end of a pencil. This provides the axle on which the straws and cups will rotate.
4. Mark one cup as a reference. You'll be measuring the speed of the wind by noting the number of complete revolutions that the anemometer makes in one minute.
5. Measure the wind speed in your classroom and at several locations outside, noting your results on the worksheet below. In addition, use the Beaufort wind scale to describe the wind speeds at each location you test.

Sea Change From

<http://school.discovery.com/curriculumcenter/oceans/activity1.html>

Background:

Water heats up and cools down more slowly than air. Why? By volume water can hold more heat than air. In this activity, you will conduct an experiment to see different rates of change in water and air temperatures.

Materials:

- 4 one-liter beakers (or quart jars)
- 4 thermometers
- graph paper
- 4 colored pencils or ink pens

Procedure:

1. Fill two beakers to the same level with tap water. Leave the other two empty.
2. Place a thermometer in each beaker.
3. Place one water beaker and one empty beaker in the shade as controls. Place the second set of beakers in direct sunlight.
4. At 10-minute intervals for the next two hours, record the temperature readings for all four thermometers on the attached worksheet.
5. Complete the remaining portions of the worksheet.