

Title: Humidity Hunters

Subject: Science

Skills: predicting, observing, recording

Grade Level: 3-6

Length of Lesson: 40 minutes

Overview: Students will compare the humidity of different plants in the classroom and the effect on plant growth. One plant will grow in a humidity tray and the other will just sit on a table.

Background information: Humidity is the amount of moisture in the air around us. Relative humidity is the amount of water in the air, compared to the amount of water the air is capable of holding. People often feel more uncomfortable on high humidity days, because there is already so much moisture in the air, that their bodies are unable to cool off through perspiration. The air around them contains so much moisture that the perspiration isn't able to evaporate, which would normally cool down the body.

Materials:

Gallon milk jug with the top cut off to where the handle starts

Two identical plants (with pot, should be small enough to fit under the inverted milk jug)

One plastic tray with shallow sides

Pea gravel

Measuring cup

Teaching the Lesson:

1. Ask students what all plants need to grow. Answers should include sunlight, air and water.
2. Ask students when plants need water. Answer should be when the soil starts to dry out. Write the definition of humidity on the board. Discuss why we feel hotter in humid weather, due to our bodies not being able to get rid of perspiration. Explain to students that they are going to conduct an experiment to see if the soil for a plant can hold water longer if it is in a humid environment.
3. One plant will sit alone on a table. This will be the control. The other plant will sit on a humidity tray with the milk container over it. To set up the humidity tray, place a shallow layer of pea gravel in the tray and almost cover the gravel with water. Place one of the plants on the gravel, and cover with the milk jug.
4. It is important that the plants be in similar locations, but not close together. One cannot be in the sun, if the other is not. Keep the plants as far away from each other as possible and try to maintain similar conditions for both, except for the milk jug and humidity tray.
5. Have students predict which plant will need to be watered more often.

6. Plants should be watered when the soil is dry to the touch. Students should add $\frac{1}{4}$ to $\frac{1}{2}$ cup of water, depending on the size of the plant pot, directly to the soil, **ONLY** when the soil is dry.
7. Measure the amount of water each plant needs over the course of 2 weeks. Students should complete the Humidity Hunters chart throughout the two week period. Use a hygrometer to measure the humidity in the room in both areas and compare to the amount of water needed to sustain a healthy plant and record this on the chart as well.

Evaluation:

Humidity Hunters worksheet can be used as an evaluation tool.

Humidity Hunters

Name _____

Complete the charts below as you observe the two different plants.

Plant 1 (control)

DAY	1	2	3	4	5	6	7	8	9	10
SOIL CONDITION										
WATER ADDED										

Plant 2 (tray)

DAY	1	2	3	4	5	6	7	8	9	10
SOIL CONDITION										
WATER ADDED										

1. Which plant do you think will need less water and why?

2. How much water did plant number 1 need?

3. How much water did plant number 2 need?

4. If the amounts of water were different for the two plants, explain why you think this is so. How could this information help you care for plants?

