



NSF GK-12 Graduate Fellows Program

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How to Detect & Measure Atmospheric Moisture

Activity Instructions

by

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Where is that moisture coming from??!!

What you will need:

1. a glass beaker
2. a thermometer
3. ice water
4. a pipette

Procedure:

1. Put a couple of inches of warm water in a cup.
2. Measure the temperature of the water and record
3. Add a few drops of cold water and stir while measuring the temperature of the water. Keep adding a small amount of cold water to the beaker until you see a thin film of water (*water vapor*) form on the outside of the cup. Make a note of the temperature of the water as soon as you see the water vapor form on the outside of the beaker.

Measuring Relative Humidity

Materials:

1. two thermometers
2. one cotton ball
3. one rubber band
4. water
5. relative humidity chart

Procedure:

1. Read the temperature of one of your thermometers and record as the dry-bulb reading
2. place the cotton ball over the bulb of the second thermometer securing it with the rubber band
3. wet the cotton ball
4. gently (and CAREFULLY) wave a notebook over the wet-bulb thermometer for about 3 minutes
5. read the temperature of the wet-bulb thermometer and record as the wet-bulb reading
6. calculate the difference between the two temperatures by subtracting the wet-bulb temperature from the dry-bulb temperature
7. determine the relative humidity using the provided chart