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Activities

Not the Heat, the Humidity

Name: _____ Date: _____

On a hot and sticky summer day, the air may feel as thick as pea soup. Most people can deal with heat better when the air is dry. In this Planet Diary activity, you'll crank up some virtual heat and humidity.

Directions

- Refresh your memory about humidity. Read the bullets for dew point and relative humidity. Refer to these definitions as you work through this simulation.
- Go to the relative humidity simulation. Read the introduction. Use the controls below the thermometers to turn the furnace off and the air conditioner on. Make sure the door is shut.
- Set the thermostat (inside tempature) to 70°Fahrenheit. Set outside temperature (thermometer on right) to 80°F. Set dew point to 40°F. Notice the numbers for outdoor and indoor relative humidity on the dials. (It takes a few seconds to reach its stable point.) Record all four numbers on the first row of the Workspace table for question 1.
- Keeping outside temperature at 80°F, increase dew point to 60°F. Notice how relative humidity changes. Record all numbers on the second row.
- Increase the dew point to 80°F and repeat. Record your data.
- How does relative humidity changes as you increase dew point? Answer questions 2 and 3.
- Experiment with increasing outdoor temperature to see how the simulation changes.

Workspace

1.

Outdoor Temperature (°F)	**Dew Point (°F)**	**Outdoor Relative Humidity (%)**	**Indoor Relative Humidity (%)**

2. In which of the three situations would the outside air feel the most uncomfortable? Why?

3. Why is there such a big difference between outdoor and indoor relative humidity in the simulation?

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