

PRELIMINARY ACTIVITY FOR A Local Weather Study

Weather is simply what is happening in the atmosphere at a particular place at a particular moment. *Climate*, on the other hand, is the average weather in an area over a long period of time. In this experiment, you will make weather measurements and investigate factors that influence weather and climate.

In the Preliminary Activity, you will gain experience measuring temperature, relative humidity, and UV radiation.

After completing the Preliminary Activity, you will first use reference sources to find out more about weather before you choose and investigate a researchable question. Some topics to consider in your reference search are:

- weather
- climate
- relative humidity
- rain shadows
- solar radiation
- hydrologic cycle

PROCEDURE

1. Go to a web site, suggested by your teacher, which gives the local weather for your school area. Note the displayed weather characteristics and their units.
2. Connect a Temperature Probe and a Relative Humidity Sensor to the data-collection interface.
3. Note and record the displayed values.
4. Disconnect the Temperature Probe and the Relative Humidity Sensor from the data-collection interface. Connect the UVB Sensor to the interface.
5. Use a ring stand and a utility clamp to suspend the UVB Sensor aiming directly at the sun. When it is aimed directly at the sun, its shadow is a small round circle. **CAUTION:** *Do not look directly at the sun.*
6. Note and record the displayed reading.

QUESTIONS

1. Describe the location where you recorded your measurements. Include observations such as:
 - a. Is the spot open? Are there buildings, trees, or other objects that could have affected your measurements?

Experiment 2

- b. What is the ground cover like—soil, vegetation, asphalt, concrete, or other?
 - c. Are there any living organisms in the immediate area?
2. Did the measurements of other groups differ from yours? Why?
3. How did your weather observations of the local weather compare with those of the web site?
4. List at least one researchable question for this experiment.