

Weather Measurements Laboratory

Name: _____

Period: _____

Objectives: Today you will rotate through weather measurement stations to learn more about and record temperature, relative humidity, barometric pressure and wind.

Temperature

Air temperature near the surface of the earth is partially determined by the solar energy absorbed by the air itself and by the energy being reflected and emitted from the soil, other materials and objects on or near the surface. Air temperature is usually measured in the shade with the *thermometer* located 40 inches above the ground.

- 1) Why should temperature always be recorded in the shade?
- 2) What is the temperature in degrees Celsius?
- 3) Use the formula $^{\circ}\text{F} = (9/5)^{\circ}\text{C} + 32$ to convert degrees Celsius to degrees Fahrenheit.

Wind

Winds are created by air masses moving in response to differences in pressure created by differences in temperature between air masses and the spin of the Earth. Wind velocity is measured with an *anemometer* and, in the United States, is expressed as miles per hour. Wind direction is measured with a wind vane. Wind direction is expressed as the direction from which the wind is blowing.

- 1) Using your own words, describe briefly how the anemometer works.
- 2) What is the wind velocity?

