

# Scientific Instruments, Part 3

What tools are used to measure weather data?

Temperature, amount of precipitation, wind direction, wind speed, and air pressure are all types of weather data. Each of these measurements requires the use of a different tool.

A **thermometer** measures temperature. It should be placed out of direct sunlight to get an accurate reading. Temperature is recorded in degrees Celsius ( $^{\circ}\text{C}$ ).

A **rain gauge** measures precipitation by collecting rain or snow as it falls. The scale of a rain gauge measures precipitation amounts in centimeters or inches.

A **wind vane** measures wind direction. Blowing wind causes the blades of the wind vane to turn. This causes the arrow of the wind vane to point in the direction from which the wind is blowing.

An **anemometer** measures wind speed. Blowing wind causes cups on the anemometer to spin. The speed of the spinning cups is shown on a display in kilometers per hour.

A **barometer** measures air pressure. A needle on the barometer moves along a scale as air pressure changes. The scale shows air pressure measurements in either **millimeters of mercury** or millibars.



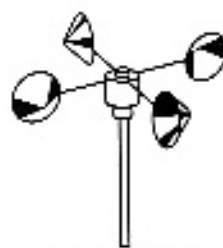
Wind vane



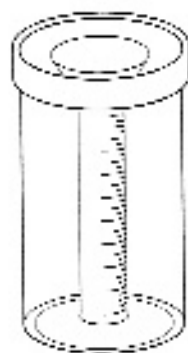
Temperature



Barometer



Anemometer



Rain Gauge

Tools for measuring weather data

## Show What You Know

Identify the tool used to make each measurement.

\_\_\_\_\_ 1. amount of rainfall

\_\_\_\_\_ 2. wind direction

\_\_\_\_\_ 3. air pressure

\_\_\_\_\_ 4. wind speed

\_\_\_\_\_ 5. temperature