

Weather and Climate Instruments





Altimeter: any instrument for measuring altitude. Altitudes are used in aircraft to indicate height above the earth's surface.



Barograph: automatically records changes in air pressure.



Anemometer: measures the velocity or speed of the wind.



Barometer: measures the pressure of the atmosphere, and determines the height above sea level, or changes in the weather.



Climate Reference Station: a part of a network which will provide future long-term homogeneous observations of temperature and precipitation.



Radiosonde: contains instruments which measure air temperature, humidity, and pressure with height, to heights less than 30 Km.



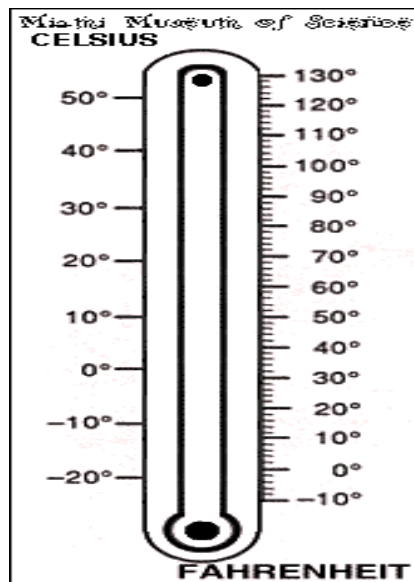
Galileo Thermometer: contains spheres in a liquid. The current temperature is indicated by the lowest floating glass sphere in the cylinder.



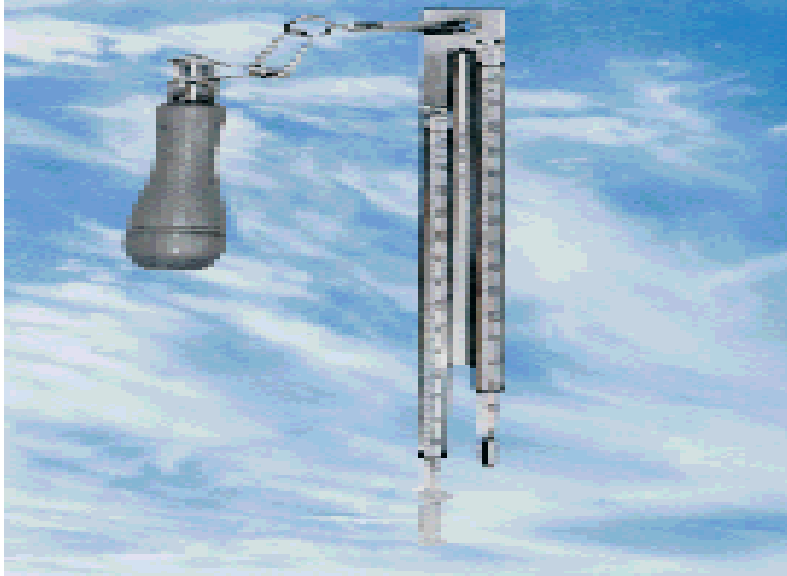
Rain Gauge: measures rainfall.



Rawinsonde: a radiosonde that measures wind direction and wind speed at various altitudes.



Thermometer: measures temperature, usually by means of the expansion and contraction of mercury or alcohol in a capillary tube and bulb.



Sling Psychrometer: consists of two thermometers mounted together with a handle attached on a chain which measures temperature and relative humidity.



Weatherball: indicates any variations in the atmospheric pressure.



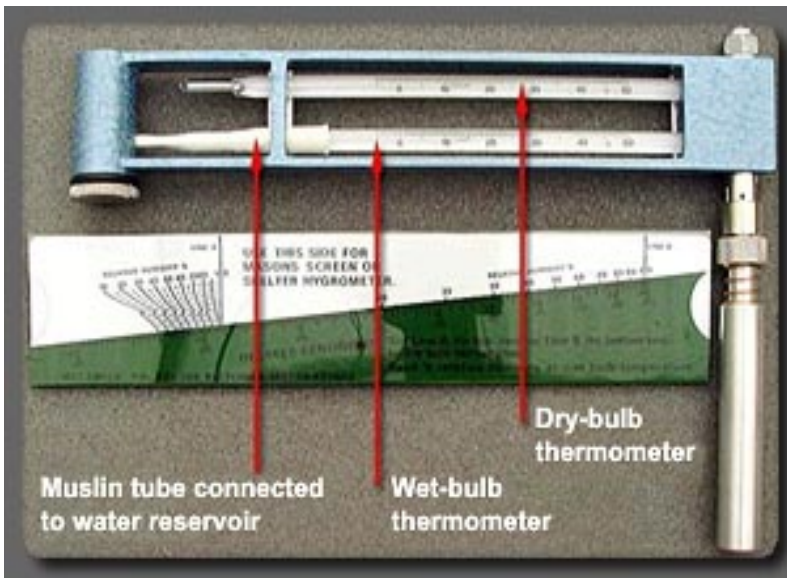
Weatherglass: shows the weather. A barometer is a weatherglass.



Weather Station: a station for taking, recording, and reporting meteorological observations.



Weather vane: device to show which way the wind is blowing.



Wet Bulb Thermometer: a thermometer with a bulb that is covered with moist muslin; used in a psychrometer to measure humidity.

N.C. Standard Course of Study and Grade Level Competencies

Grade K—Competency Goal 2

The learner will make observations and build an understanding of weather concepts.

Objectives

2.02 Identify different weather features including:

Precipitation

Wind

Temperature

Cloud Cover

Grade 2—Competency Goal 2

The learner will conduct investigations and use appropriate tools to build an understanding of the changes in weather.

Objectives

2.03 Describe weather using quantitative measure of:

Temperature

Wind Direction

Wind Speed

Precipitation

Grade 5—Competency Goal 3

The learner will conduct investigations and use appropriate technology to build an understanding of weather and climate.

Objectives

3.02 Discuss and determine how the following are affected by predictable patterns of weather:

Temperature

Wind Direction and Speed

Precipitation

Cloud Cover

Air Pressure

3.05 Compile and use weather data to establish a climate record and reveal any trends.

3.06 Discuss and determine the influence of geography on weather and climate:

Mountains

Sea Breezes

Water Bodies