

Vocabulary: Observing Weather (Customary)



Vocabulary

- Anemometer – an instrument used for measuring the speed (and sometimes direction) of the wind.
 - A vane anemometer (also called a propeller anemometer) uses a propeller to measure the wind speed and rotates to show wind direction. The propeller points in the direction the wind is coming from.
- Atmosphere – the layer of gases that surrounds Earth or another planet.
 - Earth’s atmosphere is about 60 miles thick.
- Aurora borealis – a glowing light in Earth’s atmosphere, usually near the North Pole, caused by the collisions of charged particles with atoms in Earth’s atmosphere.
 - Aurora borealis is also known as “northern lights.”
 - In the southern hemisphere, the aurora is called *aurora australis* or “southern lights.”
- Cumulonimbus cloud – a large, tall, and dense cloud that often produces heavy rain and *thunderstorms*.
 - Cumulonimbus clouds form when hot, moist air rises rapidly within the cloud, giving the cloud a great height.
- Equator – an imaginary line drawn around the middle of Earth, halfway between the north and south poles.
- Evaporate – to change from a liquid to a gas.
 - Evaporation is occurring when a puddle of rainwater dries up.
- Fog – a thick, dense cloud located near the ground.
 - Fog forms when moist air is cooled near the ground. This may happen when the ground cools at night or when moist air is cooled by a cold ocean surface.
 - Unlike mist, fog is very hard to see through. Driving or sailing in fog can be very dangerous.



Vane anemometer



Aurora australis



Cumulonimbus cloud



Fog

- Humidity – the amount of water vapor in the air.
 - The *relative humidity* is the amount of water vapor in the air divided by the maximum amount of water vapor the air can hold.
 - For example, a relative humidity of 60% means that the air contains 60% of the maximum amount of water vapor it can hold.
- Hygrometer – an instrument used to measure humidity.
 - One form of hygrometer uses a human hair to measure humidity. The hair is attached to a weight. As humidity increases, the hair stretches to a longer length. When humidity decreases, the hair contracts.
- Latitude – angular distance north or south of the equator.
 - The latitude of the equator is 0°, the latitude of the North Pole is 90° N, and the latitude of the South Pole is 90° S.
- Precipitation – any form of water that falls to the ground.
 - Examples of precipitation include rain, snow, sleet, and hail.
- Rain gauge – an instrument used to measure the amount of liquid precipitation.
 - A typical rain gauge uses a funnel to collect water into a graduated cylinder. Rainfall is measured in millimeters.
- Thermometer – an instrument used to measure temperature.
 - Inside a thermometer, a liquid (usually alcohol) expands when heated, causing it to rise into a narrow tube. The level of the liquid indicates the temperature.
- Temperature – the hotness or coldness of a substance, such as air.
- Thunderstorm – a storm that produces *lightning*.
 - Lightning is an electrical discharge from one part of a cloud to another or from the cloud to the ground.
 - A lightning bolt causes the air around it to heat and expand rapidly. This causes sound waves to be transmitted, which we hear as thunder.
 - Thunderstorms typically produce high winds and heavy rains.
- Weather – the state of the atmosphere at a time and place.
 - Weather is described by temperature, wind speed, humidity, cloud cover, precipitation, and barometric pressure.
- Weather station – a structure containing instruments for measuring the weather.
 - A typical weather station contains a thermometer for measuring temperature, an anemometer for measuring wind speed and direction, a rain gauge for measuring precipitation, a hygrometer for measuring humidity, a *barometer* for measuring pressure, and a *pyranometer* for measuring the intensity of sunlight.

