

# science **weather watch** vocabulary

**Air Mass** A large area of air with the same temperature and moisture throughout.

**Air Pressure** The force that is applied on everything on earth caused by the weight of the air.

**Atmosphere** The layer of air around the earth that consists mainly of nitrogen and oxygen gases. Most of the air is found within the first 35 km above the earth's surface.

**Anemometer** An instrument that measures wind speed.

**Barometer** An instrument that measures air pressure. Air pressure is measured in millibars or kilopascals.

**Chinook** A dry, warm, strong wind that blows down the eastern slopes of the Rocky Mountains.

**Climate** The average range of weather conditions at any place that occur over a long period of time.

**Cloud** A mass of minute water droplets or ice crystals up in the sky.

**Condense** To turn a gas into a liquid by cooling.

**Convection Current** The circulation of air or a liquid due to heating. As air is heated in one place, its particles speed up, pushing each other further apart. Since now there are fewer air particles in the same space, warm air is less dense than cold air thus it rises. The cooler air moves in to replace the rising warm air. As the warm air rises, it cools because less heat is trapped higher up in the atmosphere. Eventually this rising air begins to fall back down to the earth.

**Cumulonimbus Cloud** A towering cloud that extends upward to levels of 6-7 km above the earth's surface. Strong updraft and down drafts are associated with this cloud generating heavy rain and often hail. Lightening and thunder are also characteristic of this cloud.

**Dew Point** The temperature at which the water vapor in the air condenses out into droplets of water forming precipitation.

**Drizzle** Very fine rain consisting of drops less than 0.5 mm in diameter.

**Drought** A serious shortage of precipitation.

**Evaporate** To change a liquid into a gas by heating.

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**Fog** Clouds near the ground.

**Front** The boundary between a warm and cold air mass. If the cold air is moving in to replace the warm air, the front is called a cold front. If the warm air mass is moving in to replace the cold air, it is called a warm front.

**Hail** Round or irregular lumps of ice formed by movement of ice through super cooled moisture in the upper part of thunderheads.

**Humidity** A measure of the amount of moisture in the air.

**Kinetic Energy** Energy moving particles such as atoms or molecules. The more heat added to particles the more kinetic energy or motion they have.

**Mass** The amount of matter (concentration of particles) per unit volume of a substance, measured in grams.

**Meteorology** The study of weather.

**Precipitation** The name for moisture that falls out of the clouds.

**Radiant Energy** Energy from the sun that travels in waves and does not require a medium for its transmission.

**Relative Humidity** A measure of the amount of moisture in the air relative to the amount the air can hold at that temperature. It is expressed as a percentage.

**Saturated Air** Air that holds as much moisture as is possible at a particular temperature.

**Sleet** Super cooled rain that freezes onto cold surfaces upon contact.

**Snow** A form of precipitation that comes in the form of flakes. Consists of clusters of ice crystal frozen together into six sided shapes. Snow forms only when the air is cold enough to freeze the moisture as it condenses out of the air.

**Temperature** The amount of heat in a substance. Expressed in degrees or Fahrenheit or Centigrade.

**Thermometer** An instrument used to measure temperature.

**Water Cycle** The evaporation of moisture from a body of water into the air, the condensation of this moisture into precipitation, and its run as a river or stream back to the body of water where it started.

**Weather** The condition of the atmosphere with respect to heat/cold, wetness/dryness, clearness/cloudiness for a period of time.

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vocabulary

**Weight** The gravitational force the Earth exerts on an object. Weight is measured in Newtons.

**Wind** The movement of air along the ground. Light air movements are called breezes.

**Wind Chill** A simple measure of the chilling effect experienced by the human body when strong winds are combined with freezing temperatures. The larger the wind chill, the faster the rate of cooling.