



Vocabulary: Relative Humidity



Vocabulary

- Condense – to change from a gas to a liquid.
 - The rate of condensation increases as the temperature cools.
- Dew point – the temperature at which water vapor will condense onto a moist surface as fast as it evaporates from it.
 - When air reaches the dew point, the *relative humidity* is 100%.
 - When air is cooled to the dew point, droplets of water will start to condense on available surfaces.
- Evaporate – to change from a liquid to a gas.
 - The rate of evaporation increases as the temperature rises.
 - Evaporation causes cooling by drawing heat energy away from the surface that the liquid evaporates from.
- Humidity – the amount of water vapor in the air.
- Psychrometer – a tool used to measure *relative humidity*.
 - Psychrometers consist of a dry-bulb thermometer and a wet-bulb thermometer.
 - The psychrometer in the *Relative Humidity Gizmo*[™] is exposed to a fan to help promote evaporation from the wet bulb thermometer.
 - The greater the temperature difference between the wet and dry bulbs, the greater the relative humidity is.
- Relative humidity – the amount of water vapor in a given sample of air compared with the maximum amount of water vapor that can exist in air of the same temperature.
 - Relative humidity is expressed as a percentage.
- Saturated – filled with water.
 - In saturated air the relative humidity is 100%.
 - Air is saturated with water vapor when the rate of evaporation is equal to the rate of condensation.
 - Because the rate of evaporation increases and the rate of condensation decreases as the temperature rises, saturated warm air contains more water vapor (and therefore is more humid) than saturated cool air.
- Water vapor – water in a gaseous state.
- Wet bulb depression – the temperature difference between the dry bulb temperature and the wet bulb temperature in a psychrometer.

