



## Weather Lore

### Weather wise

Weather conditions can make a visit to a park enjoyable or a soggy situation. Forecasting the weather is a skill that doesn't require radar equipment and satellites. Before the invention of modern weather forecasting equipment and computer systems, farmers and sailors could easily predict the weather in the immediate future. They learned to watch the sky and observe the nuances of nature.

*Test your knowledge with the following quiz. See Weather Lore inside for the answers.*

#### True or False 1.

Free thermometer: count the number of cricket chirps in 14 seconds and add 40 to get the degree Fahrenheit.

#### True or False 2.

Long foretold, long last.  
Short notice, soon passed.

#### True or False 3.

When ditches and ponds offend the nose,  
Look for rains and stormy blows.

#### True or False 4.

If the goose honks high, fair weather.  
If the goose honks low, foul weather.

#### True or False 5.

Curls that kink and cords that bind  
- signs of rain.

#### True or False 6.

In frosty weather, the stars appear  
clearest and most sparkling.

#### True or False 7.

When dew is on the grass,  
Rain will never come to pass.

#### True or False 8.

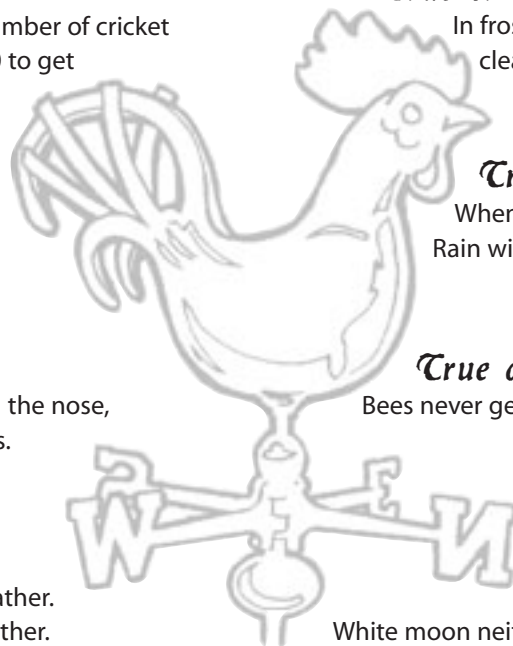
Bees never get caught in a rain.

#### True or False 9.

Pale moon rains, red moon blows  
White moon neither rains nor blows.

#### True or False 10.

A ring around the sun or moon  
Means that rain will come real soon.



# Weather Terms:



**Air Pressure:** The weight of the air when it presses down on a surface is air pressure. Air pressure changes with changes in the weather. The harder the air pushes the nicer the weather. Air pressure is measured using a barometer. The first barometers were made with a long, thin, glass tube in a container of mercury. The harder the air pushed down on the mercury the higher it would be pushed up the tube. The barometric pressure is the number of inches of tube filled with mercury. If the barometric pressure is 30.19 inches the mercury has filled 30.19 inches of the thin tube.

**High Pressure System:** Good or fair weather is normal when the air pressure is high. Skies are usually clear or mostly sunny. Air in this system moves out of the center of the high pressure in a clockwise direction. An "H" on a weather map indicates this system.

**Low Pressure System:** "Bad" weather is usually associated with a low pressure system. Cloudy days, precipitation, high winds, and rapid temperature changes can all be part of this weather pattern. Air moves into the low pressure system in a counter-clockwise direction. **Warm** and **Cold fronts** are parts of a low pressure system. Warm and Cold fronts are always south of the area of the lowest pressure. Areas north of the lowest pressure may have rain for more than 24 hours with only mild winds. An "L" on a weather map indicates this system.

*Air pressure systems move across the United States from west to east. Changes in wind direction and the barometric pressure can be used to forecast the weather.*

**Warm Front:** The part of a low pressure system when the air temperature may increase and the winds shift to a southward direction. Clouds and precipitation can be found in an area near a warm front.

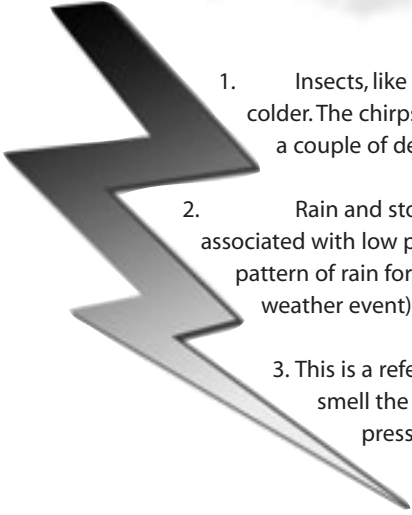
**Cold Front:** The part of a low pressure system when the air temperature may decrease and the winds shift to a northward direction. Clouds, precipitation and severe weather can be found in an area near a cold front.

**Humidity:** The relative humidity is a percentage of the actual amount of water vapor in the air compared to the amount that could be in the air at a certain temperature. Warm air can hold more water vapor than cold air.

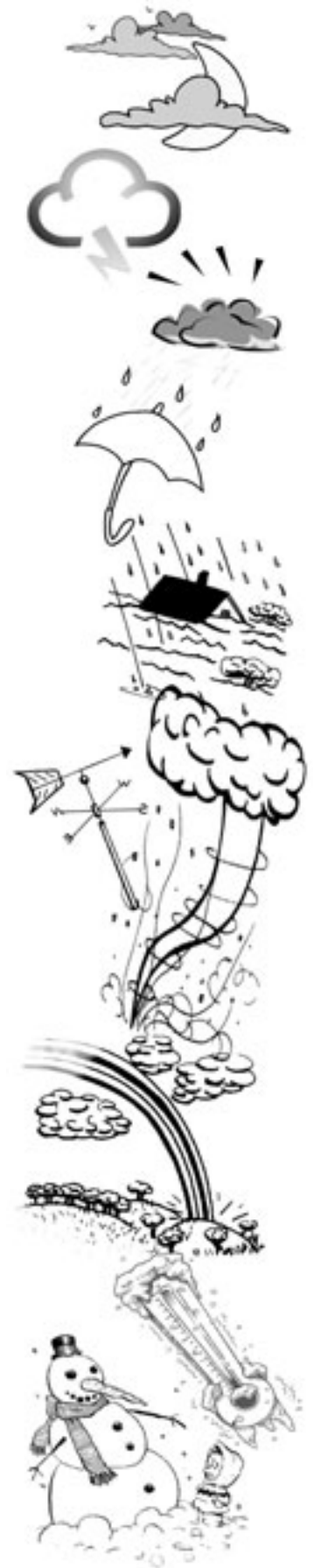
**Dew Point** is the temperature the air must be cooled to, at a constant pressure, to achieve 100 percent relative humidity.

# weather Lore

*Note:  
Each statement in the quiz is true,  
but not always! Here's why!*



1. Insects, like all cold-blooded animals, slow down as the temperature gets colder. The chirps of the cricket can be used to determine temperature within a couple of degrees using the formula.
2. Rain and storms that result from movements of warm and cold fronts associated with low pressure systems give "notice" of their approach and may set a pattern of rain for several days. "Pop-up" thundershowers (a common summer weather event) appear quickly and are over in a short period of time.
3. This is a reference to air pressure and the ability to "smell" rain. You can't smell the rain, but you can smell the earthy odors released by lower air pressure. High air pressure will keep the smells in the ground.
4. The reference to honking is not the tone of the goose's voice, but the height from which the voice is coming. The altitude at which geese fly is related to the barometric pressure. Geese prefer to fly at a level where the air is dense. During high pressure, this would be high in the sky. When the pressure is low the dense air is closer to the ground.
5. High humidity can make human hair curl and cause ropes to twist. Early scientific hygrometers (instruments that measure humidity) used long, blond hair to detect changes in humidity.
6. This is another piece of weather lore relating to humidity. Thin layers of ice crystals high in the atmosphere will dull the appearance of stars. If the air is dry the stars will sparkle. See the next weather lore answer about dew for more information.
7. Dew or frost will form when a surface is at or below the dew-point temperature. On clear nights, surfaces can cool quickly and dew or frost may form. On cloudy nights surfaces cool very slowly and little or no dew will form. The catch on this bit of folklore is the word "never." In reality, rain can occur on a day when there is dew on the grass. Afternoon and evening "pop-up" thundershowers cannot be predicted with this piece of weather lore.
8. Bees cannot navigate far from the hive without bright sunlight. On cloudy days, or when there are ice crystals high in the atmosphere, they stay close to the hive and rarely get caught in the rain. If it is not close to sunset and more bees are entering the hive than leaving, it may rain soon.
9. A dimly glowing moon indicates very high ice crystals (see number 10). The moon will look red when there is a lot of dust in the air from blowing winds or volcanic activity. A bright white moon means the air is dry and calm.
10. The ring is the result of sunlight passing through ice crystals high in the atmosphere. The ice either blows off the tops of storm clouds or forms when warm moist air is cooled in the upper atmosphere. The ice crystals are part of a leading edge of a rain system, which is traveling from west to east (the normal direction weather systems move across North America.) They precede the rain on an otherwise clear day or night, creating the ring that gives warning about the rain to come.



# Weather More

## Where to Go:

Visit Blacklick Woods Nature Center to view a weather station.

Watch the bee hive at Blendon Woods Nature Center.

Watch the geese flying around Pickerington Ponds, Sharon Woods or Slate Run Metro Park.

## References:

Anthes, Richard A., Panofsky, Hans A., Cahir, John, J., Rango, Albert. *The Atmosphere*. Charles E. Merrill Publishing Company, 1978.

Freier, George D. *Weather Proverbs*. Fisher Books, 1992.

Lyons, Walter A. *The Handy Weather Answer Book*. Visible Ink Press, 1997.

## Learn More:

### Children's books:

National Geographic *My First Pocket Guide - Weather*, Patricia Daniels, National Geographic Society, 1999.

*Storms*, Seymour Simon, Mulberry Books, 1989.

*A Drop Around the Word*, Barbara Shaw McKinney, illustrated by Michael S. Maydak, Dawn Publications. 1998.

### Activity Guides:

*Weather Together*, Robert L. Horton, Ohio State University Extension, 2001.

*203 Icy, Freezing, Frosty, Cool, & Wild Experiments*, Janice VanCleave, John A. Wiley & Sons, Inc., 1999.

## Websites:

### Weather folklore

<http://vathena.arc.nasa.gov/curric/weather/hsweathr/folktale.html> (NASA)

<http://www.usatoday.com/weather/wproverb.htm> (USA Today)

### Weather conditions and forecasts

<http://weather.noaa.gov/index.html> (National Oceanic and Atmospheric Association)

<http://www.wunderground.com/> (The Weather Underground, Inc)

### Education: Weather for teachers, students

[http://ww2010.atmos.uiuc.edu/\(Gh\)/wx/surface.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/wx/surface.rxml) (University of Illinois, Weather World 2010 Project)

<http://www.education.noaa.gov/tweather.html> (National Oceanic and Atmospheric Association for Teachers)

<http://www.proteacher.com/110022.shtml>