

How A Thermometer Works



Bulb Thermometer
Note reservoir at bottom.
Photo courtesy:
Wind & Weather

When you look at a regular outside bulb thermometer, you'll see a thin red or silver line that grows longer when it is hotter. The line goes down in cold weather.

This liquid is sometimes coloured alcohol but can also be metallic liquid called mercury. Both mercury and alcohol grow bigger when heated and smaller when cooled. Inside the glass tube of a thermometer, the liquid has no place to go but up when the temperature is hot and down when the temperature is cold.

Numbers are placed alongside the glass tube that mark the temperature when the line is at that point.

The other type of common thermometer is a "spring" thermometer. A coiled piece of metal that is sensitive to heat is used. One end of the spring is attached to the pointer.

As the air heats, the metal expands and the pointer moves higher. As the air cools, the metal contracts and the pointer moves lower. Typically, these type of thermometers are less accurate than bulb or digital thermometers.



Spring Thermometer
Photo Courtesy:
Wind & Weather