Chapter 46: Temperature

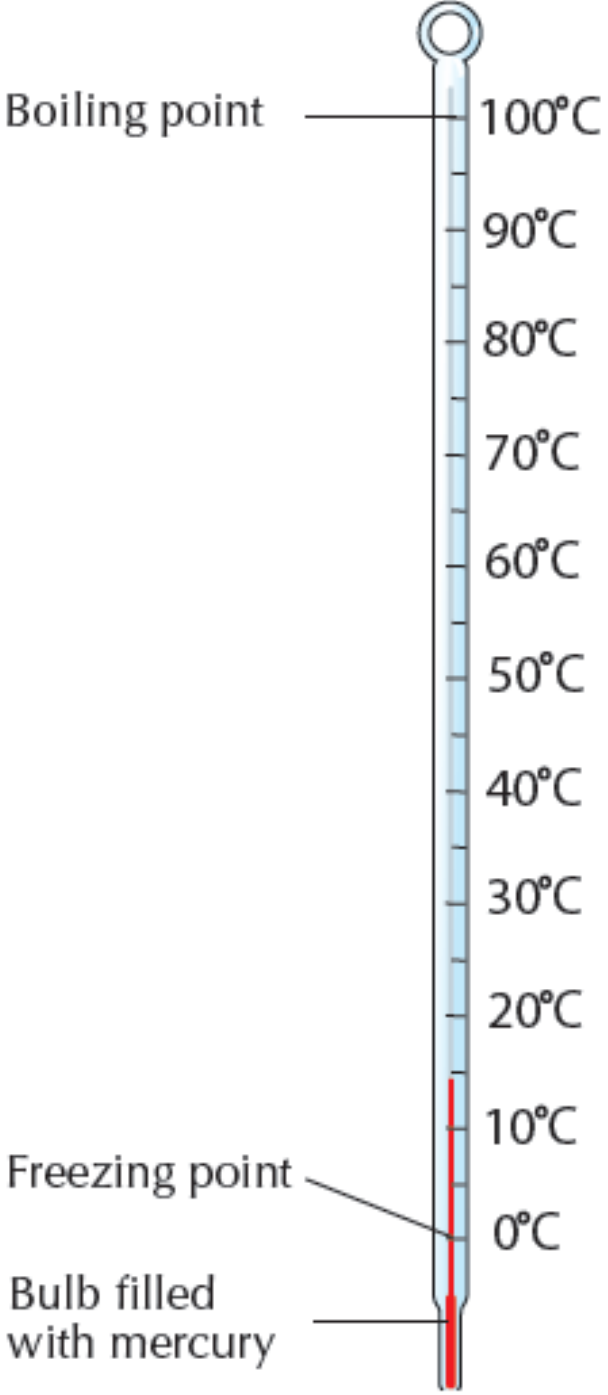
Def: Temperature is a measure of how hot an object is.

Everybody has an understanding of how hot or cold an object is. However we do have problems with this.

If you come inside from the snow, the house will “seem” very warm to you.
But somebody in the house all day would probably say it wasn’t.

The same thing happens in a swimming pool. When you get into the pool first, it seems very cold but if you stay in for a period of time, we think it has heated up.

So to solve this and find the exact temperature, we must use a thermometer.



The Thermometer.

A thermometer is a long piece of glass with mercury (or alcohol) at the bottom, an inner tube and a temperature scale.

The scale on a thermometer is usually the Celsius or centigrade scale.

When the liquid is heated, it expands up the tube. When it is cooled, it contracts down the tube.

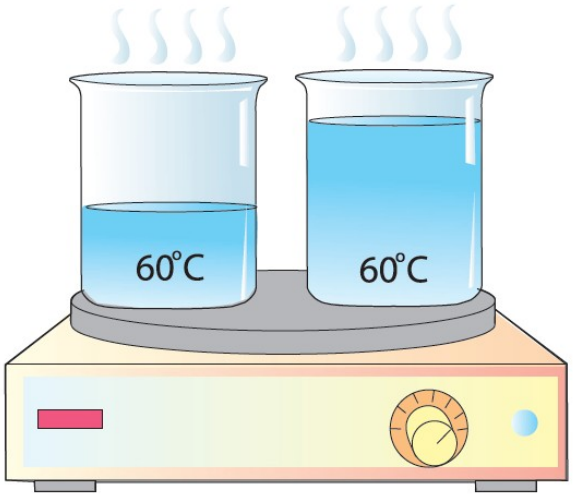
When it is placed in boiling water, it will rise to the top of the tube, at the 100°C mark.

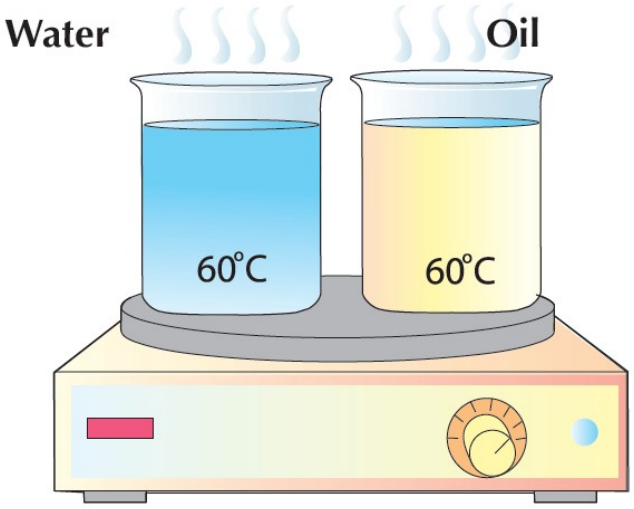
When it is placed in ice water, it was go to the bottom to the 0°C mark.

Heat and Temperature.

Heat and temperature are not the same. The amount of heat depends on the temperature, mass and type of liquid.

Look at the 2 beakers. Both are at 60°C, however one is full and one is half full. The full beaker has twice as much heat as the half full beaker. This means it will stay warmer for twice as long.





Both beakers are at 60°C and both have the same volume of liquid in it. However, the water contains more heat than the oil.

This is shown by the length of time it takes to heat the water compared to the oil. Water takes longer because it can store more heat.