**Temperature and thermometers**

If you put your hand in hot water for 2 minutes and then in water at room temperature, the water feels \_\_\_\_\_\_\_\_\_.

If you put your hand in very cold water for 2 minutes and then in water at room temperature, the water feels \_\_\_\_\_\_\_\_\_.

The reason for this is that your skin tells you only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why do people often test the temperature of water with their elbows?



\_*Because*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What’s warmer the metal or the wood?**

On your desk you have a wooden pencil and a metal pen.

Which feels warmer? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why does it feel warmer? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Thermometers**

You cannot tell how warm something is by touching it. If you want to know how warm something is, you need to use a thermometer.



There are lots of different kinds of thermometers. Label these.



1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

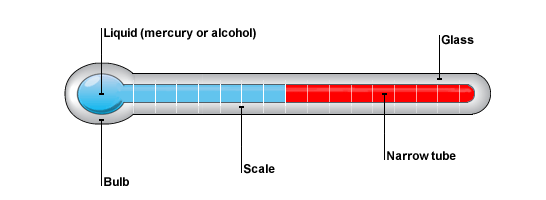
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The liquid (mercury or alcohol) themometer**

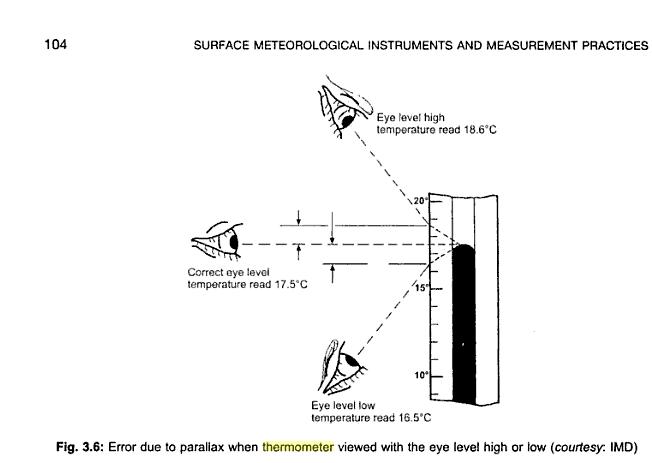
Label the parts of the thermometer.



**How to use a liquid thermometer**

* Make sure that the bulb is completely in the thing (usually air or liquid) which you want to measure.
* Weight until the liquid stops moving up or down.
* Look horizontally at the scale.

k horizontally at the scale.



**Measure the temperature**

Use a liquid thermometer to measure the temperature of:

the air in the classroom \_\_\_\_\_\_\_\_\_\_

the air outside the classroom \_\_\_\_\_\_\_\_\_\_\_

the temperature inside your clenched hand \_\_\_\_\_\_\_\_\_\_\_\_

cold water running from the tap \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Different scales**

**Fahrenheit**

This is still used in the USA and sometime in Great Britain. It was invented by a German scientist: Gabriel Fahrenheit. In this scale water freezes at 32 oF and boils at 212 oF.

**Celsius or Centrigrade**

Centrigrade (also called Celsius) is usually used in Europe and in science. It was invented by a Swedish scientist: Anders Celsius. It is also called Centrigrade because there are 100 (cent in French) degrees between the temperature water freezes (at 0 oC) and the temperature water boils at (100 oC.)

**Kelvin**

The English scientist Lord Kelvin invented this scale. This scale has no negative numbers. Water freezes at 273 K and boils at 373 K. The coldest temperature known anywhere is 0,4K – the temperature of outer space.

**Now answer the questions:**

Water freezes at \_\_\_\_\_\_\_ oC, \_\_\_\_\_\_\_\_\_oF and \_\_\_\_\_\_\_\_\_K

Water boils at \_\_\_\_\_\_\_ oC, \_\_\_\_\_\_\_\_\_oF and \_\_\_\_\_\_\_\_\_K

Where is the Fahrenheit scale used? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Where is the Centigrade scale used? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Who uses the Kelvin scale? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_