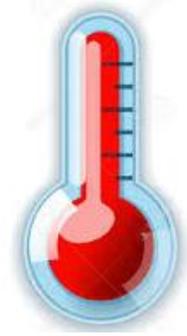


Scientist Name:

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Today Science Club are going to be.....

## TEMPERATURE!

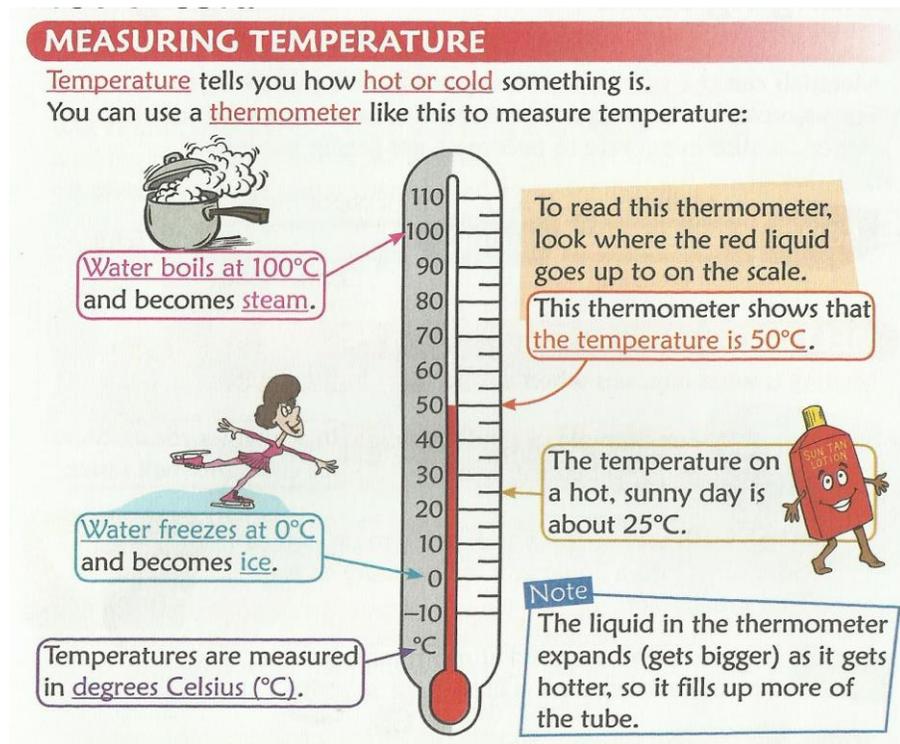
**Temperature** tells you **HOT** or **COLD** something is. You can use a **thermometer** like this to measure temperature.

**Hot things cool down** until they are the **same temperature** as their surroundings.

Similarly, **cold things warm up** until they are the **same temperature** as their surroundings.

### MEASURING TEMPERATURE

Temperature tells you how hot or cold something is.  
You can use a thermometer like this to measure temperature:



**Water boils at 100°C** and becomes **steam**.

**Water freezes at 0°C** and becomes **ice**.

Temperatures are measured in **degrees Celsius (°C)**.

To read this thermometer, look where the red liquid goes up to on the scale.

This thermometer shows that **the temperature is 50°C**.

The temperature on a hot, sunny day is about 25°C.

**Note**  
The liquid in the thermometer expands (gets bigger) as it gets hotter, so it fills up more of the tube.

### Experiments:

1. A **thermometer** measures temperatures, try and use it, do different materials vary?
2. A **thermal camera** shows an image of how warm and cold objects are (**be careful, it's expensive!**)
3. A **hand boiler** uses the warmth of your hand to heat up the air/liquid within a restricted area.
4. **Liquid nitrogen** is odourless, colourless, and tasteless, and boils at  $-196^{\circ}\text{C}$ . Our bodies contain around 3% Nitrogen In liquid form it is very dense, 1 L of liquid = 694 L of gas!

Any questions please email: [HassellScienceClub@gmail.com](mailto:HassellScienceClub@gmail.com)

## Temperature Quiz

1. What do we commonly measure temperature in? Celsius
2. When you heat something up, it evaporates or condenses?
3. Can you pour a solid? Yes / No
4. Match these items with their temperature:

- |                       |      |
|-----------------------|------|
| a. Bath water         | -2 C |
| b. Ice lolly          | 38 C |
| c. Glass of cold milk | 5 C  |

5. How could you keep a drink warm for longer?

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6. Decide whether these are solids, liquids or gases.
  - a. Vinegar
  - b. Chalk
  - c. Flour
  - d. Helium inside a balloon

7. Match these changes of state with their names

- |                                |              |
|--------------------------------|--------------|
| a. Water turns to water vapour | Melting      |
| b. Ice turns to water          | Freezing     |
| c. Water vapour turns to water | Evaporation  |
| d. Water turns to ice          | Condensation |