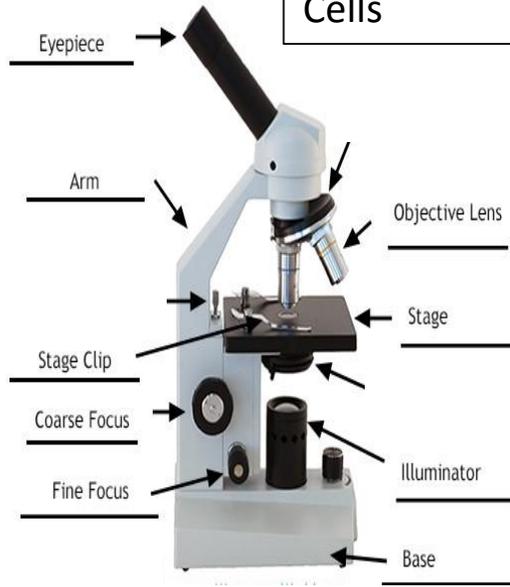


# 1. Microscopes

Total Magnification = magnification of the eye piece lens x magnification of the objective lens.

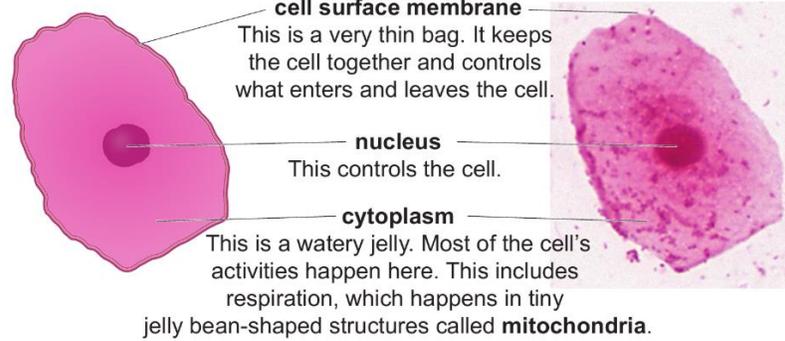
e.g. If the eye piece lens magnification is x10 and the objective lens is x 15.

What is the total magnification?

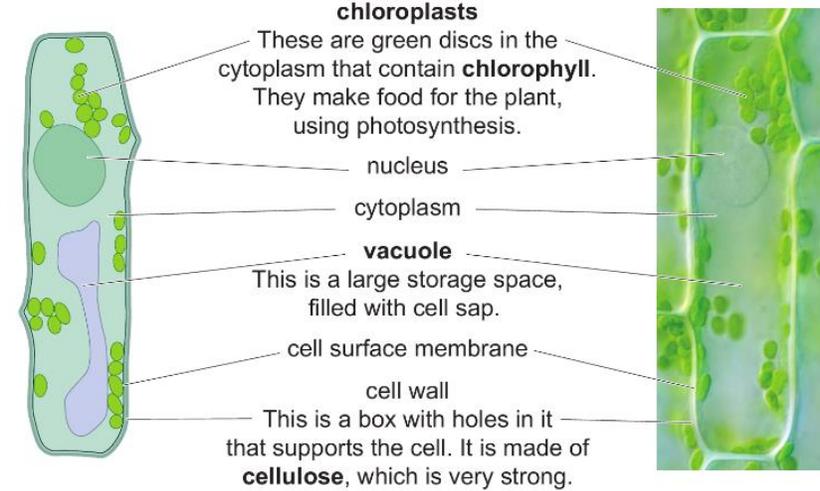


## Year 7: Lost in Space Cells

# 2. Animal cells



# 3. Plant cells



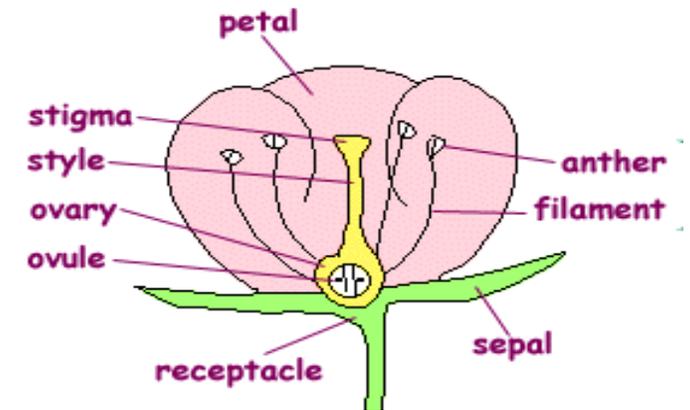
# 4. Cells, tissues, organs and organ Systems

- Cells are the building blocks of life. Some cells are specially adapted to perform specific functions, these are called specialised cells e.g. root hair cells, sperm cells, palisade cells.
- A tissue is a group of the same cells working together towards a specific function. E.g. muscle tissue, bone tissue, nerve tissue.
- An organ is made up of different tissues working together to achieve a function e.g. heart, lungs, stomach.
- An organ system is a group of organs working together to complete a function e.g. the digestive system, respiratory system.

# 5. Specialised cells

	Red blood cells	To carry oxygen	<ul style="list-style-type: none"> <li>•Large surface area, for oxygen to pass through</li> <li>•Contains haemoglobin, which joins with oxygen</li> </ul>
	Nerve cells	To carry nerve impulses to different parts of the body	<ul style="list-style-type: none"> <li>•Long</li> <li>•Connections at each end</li> <li>•Can carry electrical signals</li> </ul>
	Female reproductive cell (egg cell)	To join with male cell, and then to provide food for the new cell that's been formed	<ul style="list-style-type: none"> <li>•Large</li> <li>•Contains lots of cytoplasm</li> </ul>
	Male reproductive cell (sperm cell)	To reach female cell, and join with it	<ul style="list-style-type: none"> <li>•Long tail for swimming</li> <li>•Head for getting into the female cell</li> </ul>

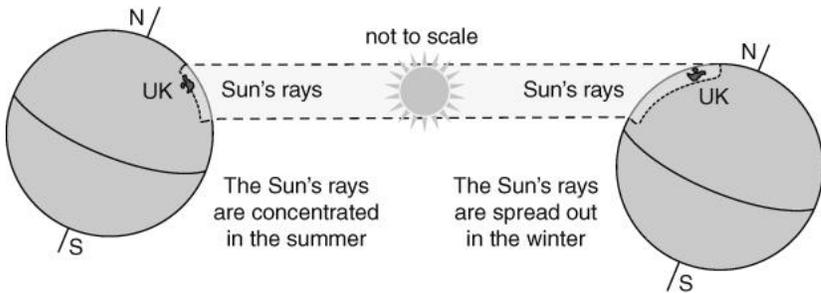
# 6. Flowers



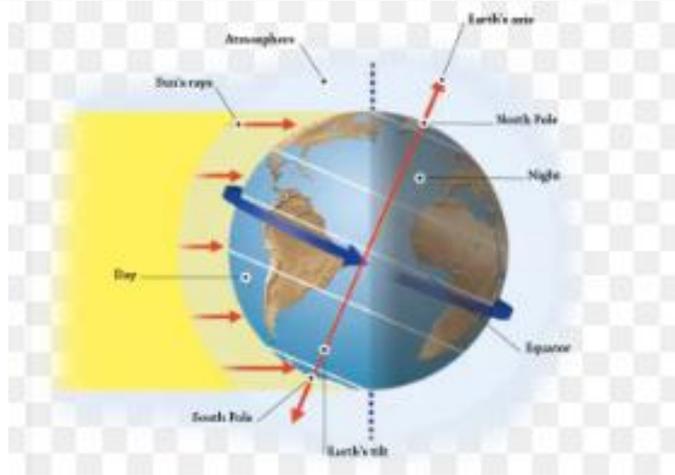
## Earth and Space

The Sun, the planets and their moons make up the **Solar System**. We live on a **planet** called the **Earth**. The Earth spins on its axis once every 24 hours. The Earth **orbits** around the Sun. It takes one year to go around once.

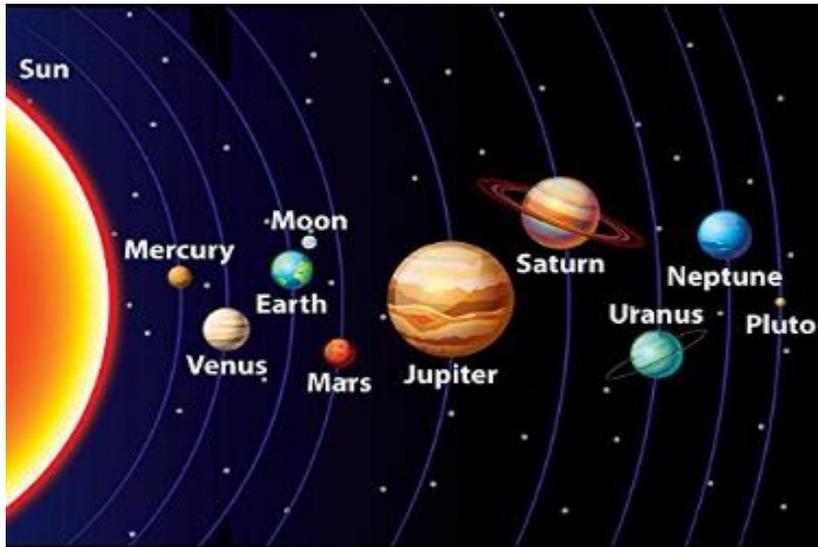
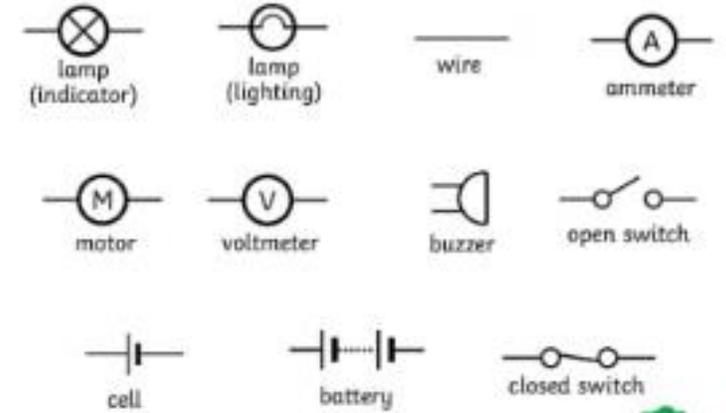
The Earth's axis is tilted. When the **northern hemisphere** is tilted towards the Sun it is summer in the UK. Days are longer than nights, and the Sun is higher in the sky. The Sun's rays are more concentrated, so it feels hotter.



## Year 7: Lost in Space Space and Electricity



## Electrical Circuit Symbols



### What is Electricity?

It causes sparks

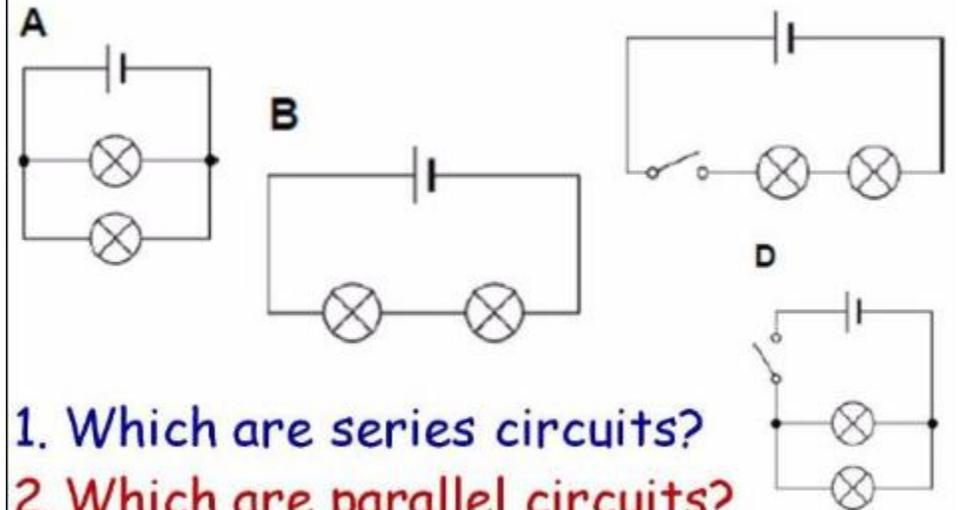
People often try to define **Electricity** in many different ways

It's what makes bulbs work

It flows through wires in electrical circuits

It makes up lightning

## Quick check.



1. Which are series circuits?
2. Which are parallel circuits?
3. Which will have bulbs that are lit?