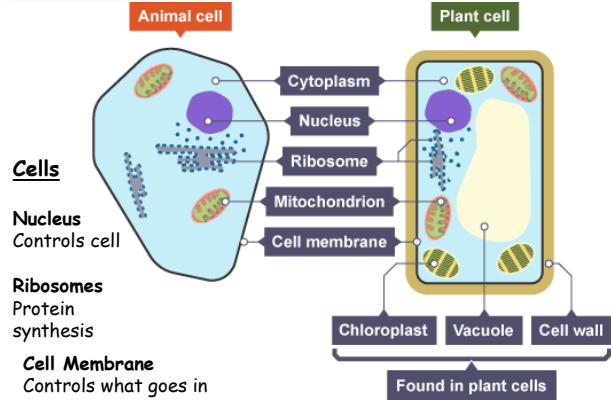
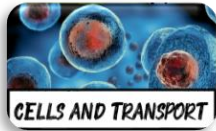
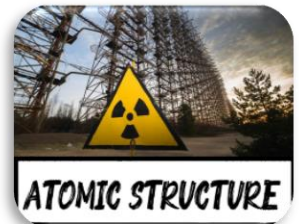


# CORE KNOWLEDGE

What I must know for my Year9 AP1 assessment



- Cells**
- Nucleus**  
Controls cell
  - Ribosomes**  
Protein synthesis
  - Cell Membrane**  
Controls what goes in and out the cell
  - Mitochondria**  
Respiration
  - Chloroplast**  
Photosynthesis
  - Cytoplasm**  
Where chemical reactions occur



**The Atom**

**Mass Number** → 12

**Atomic Number** → 6

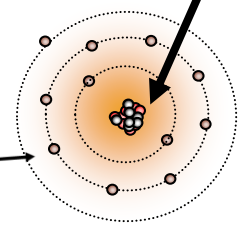
Name of particle	Relative charge	Relative mass
Proton	+1	1
Neutron	0	1
Electron	-1	Very small

**The Nucleus**  
a dense core of protons and neutrons containing nearly all the mass of the atom

The mass number tells us the number of protons + neutrons.

The number of protons in an atom is known as its atomic number, this is also the number of electrons

**'Shells' of electrons**  
electrons are really very very tiny so the atom is mostly empty space.



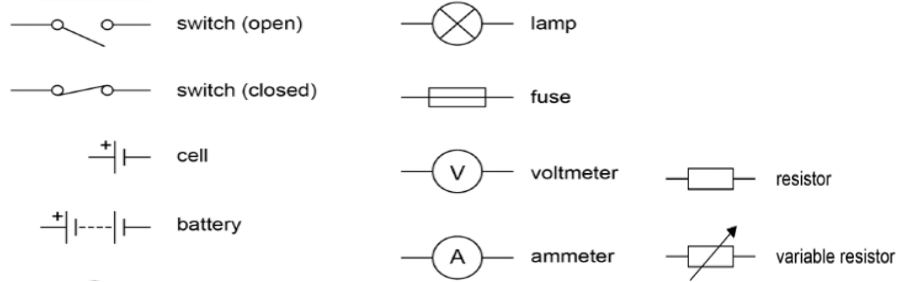
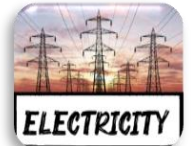
**Aerobic respiration:**

- Occurs in mitochondria

**Glucose + Oxygen → Carbon Dioxide + Water**

**Photosynthesis**

**Carbon + Water → Glucose + Oxygen**



**8 Energy Stores**

- Chemical
- Elastic
- Gravitational potential
- Nuclear
- Kinetic
- Magnetic
- Thermal
- Electrostatic