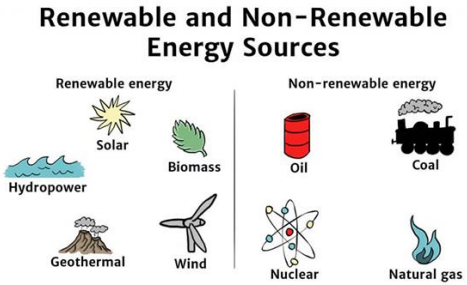
Y8 Science Term 6	Variation, Electricity and Atomic Structure	
Week 1: Term 5 Recap	Week 2: DNA	Week 3: Variation

energy source — a source from which useful energy can be extracted or converted

renewable — an energy source that will not run out

non-renewable — an energy source that is used faster than it is replenished and will run out

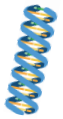
power — the amount of energy transferred in a set amount of time



joules (J) — the units for all types of energy

kWh — the unit used to state the amount of energy used by a 1kW appliance for 1 hour

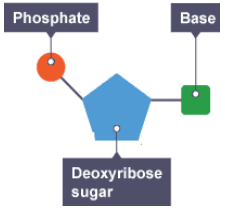
compare — to find similarities and differences between to objects

DNA  — Deoxyribonucleic acid. The material inside the nucleus of cells in a double stranded helix structure.

chromosome — The structure made of DNA that codes for all the characteristics of an organism

gene  — A section of DNA which codes for proteins

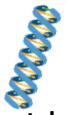
nucleotide — The monomer of DNA made up of sugar, phosphate and one of four bases (A,T,C or G)



- There are 23 pairs of chromosomes in each human body cell (46 in total).
- The four DNA bases are A,T,C and G – A always pairs with T and C always pairs with G
- Bases are held together by hydrogen bonds.

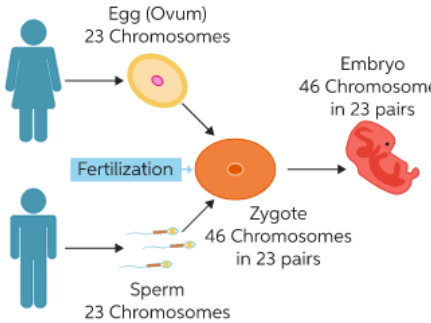
variation — The differences between individuals of the same species

heredity  — The passing on of characteristics genetically from one generation to another

genetic variation  — Variation caused by genes e.g. Eye colour or ear lobe shape

environmental variation  — Variation caused by the environment (e.g. culture/ weather). Examples include skin colour, religion, tattoos

fertilisation — When a female gamete (sex cell) and male gamete (sex cell) nuclei fuse to produce a zygote.



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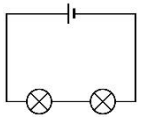
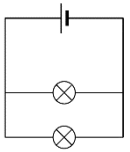
Week 4: Circuits

circuit — A complete loop which allows an electric current flow.

series circuit — A circuit with **one loop** through which current flows.



parallel circuit — A circuit with **more than one loop** which current can flow.

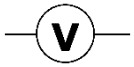


current — The rate of flow of charge, measured in Amps (A)

ammeter — A device, connected in series, which measures the current in a circuit.

potential difference — A measure of the difference in energy between two parts of a circuit measured in volts (V).

voltmeter — A device, connected parallel to a component, which measures potential difference.



Week 5: Resistance

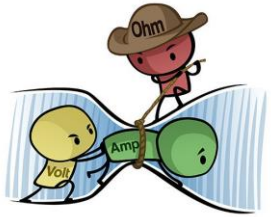
resistance — How much the wires and components reduce the flow of charge

ohms (Ω) — The unit of measure for resistance

variable — A factor which could affect experimental results (can be independent, dependent or control),

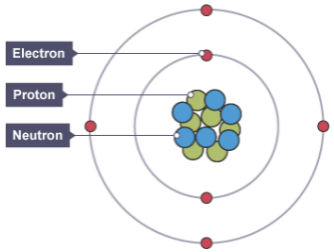
resistance equation — **Resistance =**

Potential difference (V) ÷ current(A)



Increasing the **resistance** (measured in ohms) will make it harder for **current** to flow.

Week 6: Atomic Structure



atom — The smallest piece of matter, made up of protons, electrons, and neutrons.

mass number — The total number of protons and neutrons in the nucleus of an atom.

atomic number — The number of protons only in the nucleus of an atom.

ion — An atom that has lost or gained electrons.

Subatomic particle	Relative mass	Relative charge
proton	1	1+
neutron	1	0
electron	Negligible	1-

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