

Year 10 Science Vocabulary List

(Tier 2 and Tier 3)



How Science Works and Command Words

1. **Control variables** – the variables that are kept the same each time measurements are taken in an investigation.
2. **Dependent variable** – the variable that is measured, each time the independent variable is changed, in an investigation.
3. **Directly proportional** – when the independent variable increases, the dependent variable also increases by the same amount each time. A straight-line graph that goes through (0,0) shows a directly proportional relationship.
4. **Describe** - to recall facts, events or processes in an accurate way.
5. **Explain** - to make something clear or state the reasons for something happening.
6. **Independent variable** – the variable that is changed in an investigation.
7. **Random error** - errors that cause readings to be spread about the true value, due to results varying in an unpredictable way from one measurement to the next.
8. **Systematic error** – an error that causes readings to differ from the true value by a consistent amount each time a measurement is made, often linked to faulty equipment.

Biology

1. **Anaerobic respiration** – an exothermic reaction in which glucose is broken down in the absence of oxygen to produce lactic acid in animals and ethanol and carbon dioxide in plants and yeast. A small amount of energy is transferred for the cells.
2. **Antibodies** – a protein released by white blood cells to bind to and destroy pathogens.
3. **Antibiotics** – a chemical substances made by certain fungi or bacteria that affect the working of bacterial cells, either by disrupting their structure or function or by preventing them from reproducing.
4. **Antigen** – a protein found on the outside surface of a pathogen with a specific shape.
5. **Benign tumours** – growths of abnormal cells that are contained in one area, usually within a membrane, and do not invade other tissues.
6. **Communicable** – disease caused by pathogens that can be passed from one organism to another.
7. **Malignant tumours** – invade neighbouring tissues and spread to different parts of the body in the blood where they form secondary tumours. They are also known as cancers.
8. **Metabolism** – the sum of all reactions taking place in a cell or the body of an organism.
9. **Pathogen** – microorganisms that cause disease.
10. **Photosynthesis** – the process by which plants make food using carbon dioxide, water, and light.

Chemistry

1. **Anode** – the positively charged electrode in electrolysis.

2. **Cathode** – the negatively charged electrode in electrolysis.
3. **Displacement** – a reaction where a more reactive element takes the place of a less reactive element in a compound or solution.
4. **Electrolysis** – the splitting of ionic compounds into its elements using electricity.
5. **Endothermic** – a reaction that takes in energy from the surroundings.
6. **Exothermic** – a reaction that gives out energy to the surroundings.
7. **Neutralisation** – a chemical reaction where an acid reacts with a base, forming a neutral solution.
8. **Oxidation** – the loss of electrons.
9. **Reduction** – the gain of electrons.

Physics

1. **Current** - the rate of flow of charge.
2. **Density** – the mass per unit volume of a substance.
3. **Isotope** - a different form of the same element which has the same number of protons but a differing number of neutrons.
4. **Latent Heat** - the energy required to change the physical state of a substance.
5. **National Grid** - the connection of power stations, cables and power lines that distributes electricity across the country.
6. **Potential difference** - the energy provided to a charge by a cell or battery.
7. **Power** - the amount of energy transferred over a given time.
8. **Radioactive** - an unstable substance that emits radiation to become stable.
9. **Resistance** - the force that opposes the flow of charge (current).
10. **Transformer** - a device that changes the potential difference of an alternating current.