

Year 11 Science Vocabulary List

(Tier 2 and Tier 3)



How Science Works and Command Words

1. **Compare** – to describe the similarities and/or differences between things, not just write about one.
2. **Evaluate** – to use the information supplied and existing knowledge and understanding to evidence for and against when making a judgement.
3. **Justify** – use evidence from the information supplied to support an answer.
4. **Median** – the middle value in an ordered data set.
5. **Mode** – the most common value in a set of data.
6. **Range** – the difference between the maximum and minimum values.
7. **Resolution** – the smallest reading that can be made using a particular instrument.
8. **Uncertainty** - The interval within which the true value can be expected to lie, with a given level of confidence or probability.

Biology

1. **Biodiversity** – the measure of the variety and number of species residing within an ecosystem.
2. **Consumer** – an organism that cannot make its own food and rely on the consumption and digestion of producers or other consumers
3. **Ecosystem** - a natural environment and includes the flora (plants) and fauna (animals) that live and interact within that environment.
4. **Fertilisation** – the fusion of gamete (sex cells) nuclei.
5. **Fossil** – the preserved remains of a dead organism from millions of years ago.
6. **Homeostasis** – the regulation of the internal conditions of a cell or organism to maintain optimum conditions for function, in response to internal and external changes.
7. **Meiosis** – two stage process of cell division that reduces the chromosome number of daughter cells. It is involved in making gametes for sexual reproduction.
8. **Mutation** – a change in the genetic material of organism.
9. **Producer** – Organisms such as plants and algae that can make food from raw materials such as carbon dioxide and water.
10. **Receptor** – cells that detect stimuli – changes in the internal and external environment.
11. **Reflexes** – rapid automatic responses of the nervous system that do not involve conscious thought.
12. **Stimulus** – changes in the external or internal environment that can be detected by receptors.

Chemistry

1. **Activation Energy** – the minimum energy required for a reaction to take place.

2. **Anhydrous** – describes a substance that does not contain water.
3. **Catalyst** – a substance that speeds up a chemical reaction by lowering the activation energy for the reaction, this is done by providing an alternative pathway for the reaction.
4. **Combustion** – the burning of a substance in oxygen.
5. **Cracking** – the splitting of long chain hydrocarbons into shorter, more useful hydrocarbons (an alkane and an alkene).
6. **Formulation** – a mixture that has been designed to make a useful product (e.g., Medicines).
7. **Fractional distillation** – a separation technique used to separate liquids dependent on their boiling point, often used for separating hydrocarbons in crude oil.
8. **Hydrocarbon** – a compound made up of hydrogen and carbon atoms only.
9. **Potable** – water that is safe to drink.
10. **Reversible reaction** – a reaction that can go in both directions (from reactants to product and from products to reactants).
11. **Viscosity** – how runny or fluid a liquid is, how easy it is for a liquid to flow (less viscous liquids will flow easily/be runnier).

Physics

1. **Acceleration** - the rate of change of velocity which is impacted either by magnitude or direction.
2. **Amplitude** - the maximum displacement (height) of a transverse wave.
3. **Displacement** - the difference in position between two points, measured in metres.
4. **Friction** - a force that acts to oppose the forward motion of an object when two solid surfaces are in contact.
5. **Magnitude** - a unit of measurement that specifies size or intensity.
6. **Momentum** - a physical vector quantity of an object that has both mass and velocity.
7. **Refraction** - the changing of direction of light when it passes from one medium to another.
8. **Scalar** - a physical quantity with just magnitude.
9. **Vector** - a physical quantity with both magnitude and direction.
10. **Velocity** - speed with a given direction.
11. **Wavelength** - the distance between two identical points on a wave.