

1. Genetic Variation & Evolution

double-helix two intertwined structures that form the spiral shape of DNA

gene a short section of DNA that codes for a protein

allele different versions of the same gene

mutation a change in the sequence of DNA bases

adaptation a characteristic which increases an organism's chance of survival and reproduction

evolution the gradual change of a species over time

natural selection the process by which individuals who are better adapted are able to survive longer and increase their chances of reproducing

2. Speciation & Biodiversity

species a group of organisms that can successfully interbreed to produce fertile offspring

speciation the arise of a new species due to a population becoming isolated and natural selection occurring over a long period of time

biodiversity the variety and variability of life on Earth or a particular region

extinction when there are no more individuals left of a particular species

evolutionary tree a branching diagram to show the relationships between different species over time

gene bank a collection of genetic material from seeds, plants or animals that are preserved

3. Acids & Alkalis

product a substance formed as a result of a chemical reaction

acid a substance which has a pH lower than 7

base a substance with a pH greater than 7 that reacts with an acid to form salt and water only

alkali a water soluble substance with a pH greater than 7

neutralisation the reaction between an acid and an alkali which results in a neutral pH of 7

pH scale a scale ranging from 0 to 14 which determines how acidic or alkaline a substance is

indicator a substance that changes colour when added to an acid or an alkali

4. Naming Salts

salt the substance formed when the hydrogen ion in an acid is replaced by a metal ion

acid + alkali → salt + water

Nitric acid + sodium hydroxide → sodium nitrate + water

Acid Name	Salt Name
hydrochloric acid	metal chloride
phosphoric acid	metal phosphate
nitric acid	metal nitrate
sulfuric acid	metal sulfate

5. Properties of Light

transverse wave oscillations are perpendicular to the direction of wave travel.

medium the substance which the wave is travelling through

reflection the return of a wave from a surface

refraction the change in direction of a wave passing from one medium to another with a different density

absorption the transfer of energy of a wave to matter as the wave passes through

incident ray the ray of light travelling towards the surface

reflected ray the ray of light travelling away from the surface due to the process of reflection

6. Lenses & Filters

convex lens a piece of transparent material with curved sides to refract and focus light

convex an outline or surface that curves outwards

prism a 3D shape that has straight edges

white light contains all the colours

The object is yellow as the object absorbs all colours of the visible light spectrum except yellow light. This is then reflected into your eye therefore making the object appear yellow .

