Biology



1. Cell biology

Eukaryotic and prokaryotic cells Specialised Cells

2. Organisation

The Circulatory System Health and risk factors

3. Infection and response

Preventing the spread of pathogens

4. Bioenergetics

Photosynthesis

5. Homeostasis and response

The nervous system Hormones in human reproduction

6. Inheritance, variation and evolution

Genetic inheritance

Asexual vs sexual reproduction and meiosis DNA and the genome Natural Selection

7. Ecology

Adaptation

Human impact on the environment

Chemistry



1. Atomic structure

Atoms, elements, compounds and mixtures Separating mixtures The Periodic Table

2. Bonding

Ionic bonding

Solids, liquids and gases

Properties of ionic, covalent, metallic structures

Giant covalent structures

3. Quantitative Chemistry

Conservation of mass and balanced chemical equations

4. Chemical Changes

Extraction of metals Reactions of acids Making salts

5. Energy Changes

Exothermic and endothermic reactions

6. Rate and extent of chemical change

Factors affecting rates

7. Organic Chemistry

Crude oil and alkanes Potable water

8. Chemical Analysis

Chromatography Gas tests

9. Chemistry of the atmosphere

The Earth's atmosphere

10. Using Resources

Potable water

Life Cycle Assessment

Physics



1. Energy

Energy

National and global energy resources

2. Electricity

Circuit Symbols Introduction to Electricity Domestic uses and safety

3. Particle model of matter

Density

Solids, liquids and gases

4. Atomic structure

Radioactive decay

5. Forces

Contact and non-contact forces
Work done and energy transfer
Distance and Displacement, Speed and
Velocity
Forces and braking (Double)

6. Waves

Transverse and longitudinal waves Properties of waves Electromagnetic waves 1 Electromagnetic waves 2

7. Magnetism and electromagnetism

Permanent and induced magnetism and fields

The motor effect

8. Space Physics

[None]