

Year 8 Science

Ecosystems Processes

- Photosynthesis and chemosynthesis
- Respiration resulting in the release of energy
- Energy transfer within feeding relationships and the impact of disruptions to this balance within ecosystems

The Periodic Table

- Development of the periodic table
- Metals and non-metal
- Group 1 and 7 elements
- Group 0 elements

Electricity and Magnetism

- Understanding electric circuits – current, potential difference and resistance
- Series and parallel circuits
- Magnets and magnetic fields
- Electromagnetism

Adaptation and Inheritance

- Competition and adaptations
- Variation and inheritance
- Natural selection and extinction

Separation Techniques

- Mixture, solubility and solutions
- Different methods of separation according to their physical properties
- Chromatography to identify pure substances

Motion and Pressure

- The relationships between speed, acceleration, time & distance.
- Calculating pressure.
- Applications of pressure

Health and Lifestyle

- The components of a healthy diet including nutrients.
- How to test for different components in food.
- The digestive system and the roles of bacteria and enzymes in this process.
- Effects of smoking and drugs on short and long-term health.

Metals and Acids

- Reactions of metals with acids, water and oxygen
- How metals are extracted
- Displacement reactions
- Ceramics, composites and polymers

Energy

- Energy and temperature
- Energy transfer by particles and radiation
- Energy and power
- Energy resources
- Work, energy and machines

The Earth

- The Earth and its atmosphere
- Earth's resources and recycling
- Climate change
- The carbon cycle

**Advice to students
for independent
study**

- Students can access Sam Learning and BBC Bitesize to support learning and revision. They could also consider purchasing revision books from the following site:
https://www.cgpbooks.co.uk/Student/books_ks3_science
- Students should read about Science in everyday life; newspapers often have interesting stories.