



Science: Year 8 Overview

Autumn term: Introduction to science

Students learn about lab hazards, symbols and equipment in order to work safely in the lab.

B5 – Respiration

Students learn about the respiratory system, the adaptations of the alveoli. We also look at the difference between anaerobic and aerobic respiration.

C4 – The periodic table

We follow in the footsteps of Dmitri Mendeleev by looking at the patterns in the periodic table. We study the reactions of group 1, 7 and 0.

P6 – Light, sound and space.

Students study the anatomy of waves, and how waves can be reflected and refracted. We study how we see colour, and how ultrasonic waves are used. We also study our solar system, and how day and night, and the seasons are caused. Finally learning how to calculate astronomical distances.

C7 – Rates of reaction

Students build on their knowledge of reactions from year 7 to study how acids react with alkalis, metals, carbonates, and metal oxides. We also learn how to prepare soluble and insoluble salt samples in the lab.

Spring term:

P5 – Domestic and static electricity

We build on the knowledge of circuits from year 7, and learn how to calculate potential difference, energy and power. We examine how static electricity occurs and we pay for electricity in the home.

C6 – Reactions of metals

Students study the reactions of acids with alkalis, metals, carbonates, and metal oxides. We learn how to make soluble and insoluble salts in the lab.

B6 – Variation and evolution

We unlock the secrets of DNA, from its discovery to how changes in DNA drives evolution. We study Darwin's theory of natural selection, extinction and adaptations. We study how humans are manipulating the genome through selective breeding and genetic engineering.

Summer term:

C5 – Extracting metals

We investigate how metals are extracted through reduction and electrolysis. We study the reactivity of metals and how this determines the products of displacement reactions.

B7 – Drugs and health

Students discover the bacteria, viruses and fungi that cause disease. We learn how the body defences protect us from attack, and how vaccination works. We also study the different types of drugs and how smoking and alcohol affect the body.

P7 – Heat transfer

Students learn how heat travels through conduction, convection and radiation. We then look at how well different materials act as insulators.