



Science: Year 7 Overview

Autumn term: Introduction to science

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

B1 – Cells and reproduction

Students learn about the difference between animal and plant cells, how to use a microscope. We then cover puberty and how animals and plant reproduce.

C1 – The particle model

Students learn about the particles in solids, liquids and gases. We look at changing state, diffusion, density and pressure.

P3 – Electrical circuits

Students learn how to draw circuit diagrams for series and parallel circuits, and how current and voltage change in these two types of circuits. We also study resistance, how to wire a plug and alternating and direct current.

B4 – Food and digestion

We student what a balanced diet consists of, and what foods are rich in the seven different nutrients. We examine what happens in the digestive system and the role of enzymes.

Spring term:

P1 – Energy

We study energy stores and transfers, along with looking at fuels, calculating power and the efficiency of different devices. We also study the different renewable and non-renewable energy sources and how electricity is generated.

B2 – Variation and classification

We study how we classify organisms into different groups, and how genes and the environment control characteristics.

C2 – Chemical reactions

We study the reactions between acids and alkalis, along with the pH scale. We learn how to name the products formed along with the difference between a chemical reaction and a physical change. We also learn how to test for hydrogen, carbon dioxide and oxygen, and study the chemical reaction of burning.

P4 – Magnets and Electromagnets

We examine the fascinating world of magnets, including how magnets are made and effect objects around them. We study and build electromagnets, and work out how to make them stronger and what they are used for.

Summer term:

B3 – Plants and Ecology

We study how plants make their own food through photosynthesis, and the crucial role of plants in food chains. We continue to look at how human are effecting these food chains with pollution.

C3 – Elements, compounds and mixtures.

Students discover the difference between atoms, elements, compounds and mixtures. We then study how to separate mixtures through filtering, evaporation, distillation and chromatography.

P2 – Force and speed

Students study the interaction of forces on objects, including calculating moments, and the difference between mass and weight. Students learn how to calculate speed and how to represent this data in a graph.