



OVERVIEW

The aim of Science is to inspire and enthuse our students, to develop inquisitive minds that question the world around them, come up with new ideas and discover new evidence that shapes our understanding of the world in which we live. In Year 8, we study digestion and nutrition which leads into detail of certain types of specialised cells, building on prior knowledge built in the Y7 Cells unit. We also learn about the history of the periodic table which builds on students learning of particles in Year 7. In Physics, students will learn about electricity and magnetism. This follows on from the energy topic in year 7.

Autumn

8PL – Light and Space

- Light as a wave that transfers energy
- Reflection and Refraction
- Vision and problems with vision
- Colours of the spectrum and how colour is seen.
- Earth in space
- Seasons and the Earth's place in the universe.

8CP – Periodic Table

- Elements compounds, mixture
- Naming compounds and formulae
- Conservation of mass and symbol equations
- The periodic table and atomic models
- Electron configuration

Assessment:

End of Topic Tests for each unit

Fluency once a week to support development of key skills

Personal development:

Students learn about the beauty of natural objects.

Students learn about John Dalton – a chemist from Manchester

Spring

8BD – Digestion and Nutrition

- Components of food and a balanced diet
- Food Tests
- Organs of the digestive system
- Enzymes

8PE – Electricity and Magnetism

- Current in series and parallel circuits
- Ohm's Law
- Magnets and magnetic fields
- Electromagnets and their uses

Assessment:

End of Topic Tests for each unit

Fluency once a week to support development of key skills

Mid Year Assessment on 8PL, 8CP, 8BD plus foundational knowledge from Y7

Personal development:

Students learn about what the different nutrients for a healthy balanced diet are. They learn diseases that can come from lack of vitamins and/or minerals.

Summer

8CM – Materials and Earth

- Structure of the Earth and basic plate tectonics
- Formation of rocks and their physical properties
- Fossil formation.
- Changes in the atmosphere

9BP – Plants and Photosynthesis

- Structure and function of roots and leaves
- Photosynthesis and factors that affect its rate
- Plants as producers

9PM – Matter

- Particle model, kinetic theory and resultant forces.
- Density
- Pressure and diffusion

Assessment:

End of Topic Tests for each unit

Fluency once a week to support development of key skills

End of Year Assessment based on all topics studied this year, plus foundation knowledge from Y7

Personal development:

Students learn about the effect of alcohol and drugs on a healthy body

Useful resources for supporting your child at home:

- BBC Bitesize
- Seneca
- Knowledge Organisers

Homework:

Set weekly, either paper based or on Seneca