



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 7 students will develop fundamental knowledge and skills in biology, chemistry and physics whilst developing working scientifically skills by completing practical activities. There will be a focus on fluency and skills related to the topics, such as graph drawing and analysing, identifying variables and evaluating scientific conclusions.

Autumn

7CP Particles

- Solids, liquids, gases
- Particle model
- Diffusion
- Change of state
- Separation techniques
- Pure and impure substances
- Rock salt purification practical.
- Temperature and

7BC Cells

- Animal cells
- Plant cells
- Using a microscope
- Unicellular organisms
- Diffusion and transport
- Specialised cells
- Organisation
- Respiratory system
- Digestive system

Assessment:

End of Topic Tests for each unit

Fluency once a week to support development of key skills

Personal development:

Students learn about the awe and scale of living things from the smallest microorganisms to largest

Spring

7PE Energy

- Energy paths & transfers
- Calculations of gravitational potential energy, kinetic energy, elastic energy
- Energy sources
- Renewable and non-renewable
- Sustainability.
- Electricity – circuits, p.d and current.

7BR Reproduction

- Puberty
- Fertilisation, Gestation and Birth
- Menstrual cycle
- Plant reproduction
- Germination
- Variation
- Evolution

Assessment:

End of Topic Tests for each unit

Fluency once a week to support development of key skills

Mid-Year Assessment on 7CP, 7BC, 7PE

Personal development:

Students learn about issues related to smoking and drinking alcohol during pregnancy.

They consider the environmental implications of energy use

Summer

7CC – Chemical Reactions

- Physical & Chemical change
- Simple word equations
- Acids and alkalis
- Indicators and neutralisation

7PF – Forces

- Force Diagrams
- Contact and non-contact
- Calculations
- Weight & mass
- Speed
- Friction
- Distance/time graphs

8BP Biological systems and processes

- Skeleton
- Muscles
- Respiratory & circulatory systems
- Smoking
- Alcohol
- Drugs

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.

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