

Science

Subject Intent:

All students will have the knowledge, skills and desire to understand and question the world around them

What will students be studying?

Pupils follow the full Key Stage 3 National Curriculum throughout Year 7, 8 and 9. Disciplinary knowledge is repeated in each cycle and Substantive knowledge is repeated throughout each year to ensure all pupils are GCSE ready by the end of Year 9.

Cycle 1 Physics

- Contact forces
- Pressure
- Speed
- Sound

Cycle 2 Biology

- Breathing
- Respiration
- Photosynthesis
- Inheritance

Cycle 3 Chemistry

- Metals and non metals
- Separating mixtures
- Types of reaction
- Chemical energy
- Earth's resources

Threshold Concepts

- TC1 Cells
- TC2 Interdependence
- TC3 Particles
- TC4 Chemical reactions
- TC5 Forces
- TC6 Energy
- TC7 Planning
- TC8 Obtaining
- TC9 Analysing
- TC10 Evaluating

How are teaching groups organised?

Students are taught in banded groups based on prior attainment and receive five Science lessons each week

How will students be assessed?

- Two integrated assessments take place as independent, closed book tests, during lesson time within each Cycle.
- Key Assessment Tasks (KATs) take place at the end of each Cycle. They consist of two parts; the first section comprises of online multiple choice questions focusing on knowledge. The second section is a written test which assesses a pupil's ability to apply their knowledge, work scientifically and complete extended writing

How will we challenge/support students learning?

- By combining high expectations with strong guidance and encouragement, the science department helps students to develop both scientific knowledge and confidence in ability
- Pupils are encouraged to develop their critical thinking through questioning, practical investigations, analysis and extended writing
- Teachers use models, demonstrations and visual aids to secure understanding
- Frequent feedback and a positive and safe learning environment nurture a sense of belonging, where mistakes are treated as part of the learning journey

How is homework set?

Sparx Science is set every week and pupils have 1 week to complete the task

Useful resources, website and extra curricular links to support learning.

[Sparx Science](#)

[KS3 BBC Bitesize](#)

[Cycle 1 Physics Padlet](#)

[Cycle 2 Biology Padlet](#)

[Cycle 3 Chemistry Padlet](#)

Teams (lesson PowerPoints and resources)