

# 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 Chemistry

- Acids and alkalis
- Metals and non-metals
- Particle model
- Separating mixtures

#### Cycle 2 Physics

- Forces and Speed
- Gravity
- Space
- Light

#### Cycle 3 Biology

- Cells
- Movement
- Variation
- Human reproduction

### 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 mixed ability groups 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 Chemistry Padlet](#)

[Cycle 2 Physics Padlet](#)

[Cycle 3 Biology Padlet](#)

Teams (lesson PowerPoints and resources)