Science at key Stage 3

Students study the following topics during key stage 3:

- Introduction to Science
- The particle model
- Heating and cooling
- Cells
- Separating mixtures
- Energy transfer and chemical energy
- Reproduction
- Elements
- Forces and speed
- Interdependence, variation and evolution
- The Periodic Table and electronic structure
- Human body systems
- Electricity
- Acids and alkalis
- Respiration, photosynthesis and excretion
- Metals and non-metals
- Light
- Sound
- Gravity and space

Students are formally assessed each half term. These tests focus on fundamental knowledge and skills and include questions from any topic studied up to that point. The results of these assessments are analysed carefully and are used to identify individual areas of strength and weakness. The curriculum is reshaped to reflect this analysis, focussing effort where it will benefit students the most.

Science at key Stage 4

Most students follow the AQA Combined Science: Trilogy specification. Full details are available from the AQA website here: https://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464

Students sit a total of 6 exams at the end of Year 11, each 75 minutes long. The topics included in each exam are as follows:

Biology paper 1	Chemistry paper 1	Physics paper 1
Cell structure and transport Cell division Organisation and the digestive system Organising animals and plants Communicable diseases Preventing and treating disease Non-communicable diseases Photosynthesis	Atomic structure The Periodic Table Structure and bonding Chemical calculations Chemical changes Electrolysis Energy changes	Conservation and dissipation of energy Energy transfer by heating Energy resources Electric circuits Electricity in the home Molecules and matter Radioactivity

Respiration		

Biology paper 2	Chemistry paper 2	Physics paper 2
The human nervous system Hormonal coordination Reproduction Variation and evolution Genetics and evolution Adaptations, interdependence and competition Organising an ecosystem Biodiversity and ecosystems	Rates and equilibrium Crude oil and fuels Chemical analysis The Earth's atmosphere The Earth's resources	Forces in balance Motion Force and motion Wave properties Electromagnetic waves Electromagnetism

Students who choose triple Science as an option follow the AQA specifications in Biology, Chemistry and Physics. Full details are available from the AQA website here:

Biology: https://www.aqa.org.uk/subjects/science/gcse/biology-8461
Chemistry: https://www.aqa.org.uk/subjects/science/gcse/chemistry-8462
Physics: https://www.aqa.org.uk/subjects/science/gcse/physics-8463

Students sit a total of 6 exams at the end of Year 11, each 105 minutes long.

Science at key stage 5

Students have the opportunity to continue their study of Science in key stage 5 by completing A-levels in Biology, Chemistry and Physics. Further details of each are given below:

A level Biology students follow the Pearson 'Salters-Nuffield A-level Biology' specification. Full details are available here:
https://www.pearsonschoolsandfecolleges.co.uk/fe-vocational/subjects/science-fe-vocational/salters-nuffield-as-and-a-level-biology-2015-snab

A level Chemistry students follow the AQA specification. Full details are available here:
https://www.aqa.org.uk/subjects/science/as-and-a-level/chemistry-7404-7405

A level Physics students follow the AQA specification, including the 'Turning points' optional unit. Full details are available here:
https://www.aqa.org.uk/subjects/science/as-and-a-level/physics-7407-7408