

Curriculum Information for the School Website

Subject: Science

List of TLR Holders and their responsibilities:

Mr James Dovey	Head of Science,
Mrs Felicity Tyrer	Head of Key Stage Four,
Mr Callum McTaggart	Head of Key Stage Three

Department aims:

To provide an engaging curriculum where students can make excellent progress and achieve as high as possible in relevant qualifications to ready them for the next stage in their education.

Approaches to teaching and learning:

Engaging lessons with student centred learning where the teacher is a facilitator rather than a deliverer of content. There will be a mixture of independent and group work, including a wide range of different activities. Work will be differentiated to support and challenge all students where necessary. Assessment of learning will be regular and rigorous with exam based testing each half term.

Why the department has adopted this curriculum plan: (Curriculum Intent):

To enable students to enjoy science, be inquisitive about the world around them, and make excellent progress.

Principles of sequencing learning in this subject:

Our key stage three curriculum builds on the knowledge gained at key stage two and adds to it by covering a wider variety of topics. These topics build on key stage two, but then also prepare the students for what is studied at key stage four. The curriculum is designed so that it is interleaving (topics are revisited regularly to help retention) and to help students make better progress. The topic taught at key stage three are all taught at GCSE, just with differing levels of details and more difficult concepts. We are therefore confident that our key stage three curriculum provides a sound foundation for key stage four.

Curriculum Outline:

Year 7	Autumn Term	Spring Term	Summer Term
Knowledge taught	The Particle model, Cells, Speed, Wave properties	Metals and non-metals, Current, Interdependence, Energy costs and energy transfers	Contact forces, Variation, Voltage and resistance, Separating mixtures
Skills taught	Problem solving,	Problem solving, practical	Problem solving,

	practical skills, data collecting skills, graph drawing skills, applying knowledge to different contexts.	skills, data collecting skills, graph drawing skills, applying knowledge to different contexts.	practical skills, data collecting skills, graph drawing skills, applying knowledge to different contexts.
Assessments	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion

Year 8	Autumn Term	Spring Term	Summer Term
Knowledge taught	Elements and the periodic table, Acids and Alkalis, Photosynthesis	Gravity, Magnetism, Heating and cooling, Light	Types of reaction, Chemical energy, Inheritance, Breathing and digestion
Skills taught	Problem solving, practical skills, data collecting skills, graph drawing skills, applying knowledge to different contexts.	Problem solving, practical skills, data collecting skills, graph drawing skills, applying knowledge to different contexts.	Problem solving, practical skills, data collecting skills, graph drawing skills, applying knowledge to different contexts.
Assessments	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion

Year 9	Autumn Term	Spring Term	Summer Term
Knowledge taught	Respiration, Climate and Earth resources, Work (Energy) If studying triple science, the students start the GCSE content here. Chemistry topic 1, Chemistry topic 2.	Electromagnetic waves, Evolution, Chemistry topic 1 - starting the GCSE course for combined science Triple science: Biology topic 1	Combined science: Chemistry 2, Physics 4 Triple science: Biology topic 2, Physics topic 4
Skills taught	Problem solving, applying knowledge to different contexts, practical skills	Problem solving, applying knowledge to different contexts, practical skills	Problem solving, applying knowledge to different contexts, practical skills
Assessments	Half termly tests, other	Half termly tests, other	Half termly tests,

	assessments at teacher's discretion	assessments at teacher's discretion	other assessments at teacher's discretion
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GCSE Syllabus Information: AQA

Year 10	Autumn Term 1	Spring Term 1	Summer Term 1
Knowledge taught	Triple science: Chemistry 4, Chemistry 5 Combined science: Chemistry 4, Chemistry 5	Triple science: Physics 5, Physics 3 Combined science: Physics 1, Physics 2	Triple science: Biology 3, Biology 7 Combined science: Biology 3, Physics 6
Skills taught	Problem solving, applying knowledge to different contexts, practical skills	Problem solving, applying knowledge to different contexts, practical skills	Problem solving, applying knowledge to different contexts, practical skills
Assessments	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion
Year 10	Autumn Term 2	Spring Term 2	Summer Term 2
Knowledge taught	Triple science: Physics 1, Physics 2 Combined science: Biology 1, Biology 2	Triple science: Chemistry 3, Chemistry 6, Chemistry 7 Combined science: Chemistry 3, Chemistry 6, Chemistry 7	Triple science: Physics 6 Combined science: Physics 5, Physics 3
Skills taught	Problem solving, applying knowledge to different contexts, practical skills	Problem solving, applying knowledge to different contexts, practical skills	Problem solving, applying knowledge to different contexts, practical skills
Assessments	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion

Year 11	Autumn Term 1	Spring Term 1	Summer Term 1
Knowledge taught	Triple science: Biology 5, Biology 6	Triple science: Physics 8	Triple science: Revision

	Combined science: Biology 4, Biology 5	Combined science: Biology 6	Combined science: Revision
Skills taught	Problem solving, applying knowledge to different contexts, practical skills	Problem solving, applying knowledge to different contexts, practical skills	Problem solving, applying knowledge to different contexts, practical skills
Assessments	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion
Year 11	Autumn Term 2	Spring Term 2	Summer Term 2
Knowledge taught	Triple science: Biology 4, Chemistry 8, Chemistry 9, Chemistry 10 Combined science: Chemistry 8, Chemistry 9, Chemistry 10	Triple science: Physics 7 Combined science: Physics 7, Biology 7	Triple science: Revision Combined science: Revision
Skills taught	Problem solving, applying knowledge to different contexts, practical skills	Problem solving, applying knowledge to different contexts, practical skills	Problem solving, applying knowledge to different contexts, practical skills
Assessments	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion	Half termly tests, other assessments at teacher's discretion

How students will receive feedback to enhance their knowledge and skills:

Verbally, through peer assessment, through marking of work

Reading List (Key Stage 3):

CGP KS3 Science Study Guide

Reading List (GCSE):

CGP GCSE Combined Science AQA Revision Guide (Higher or Foundation), CGP GCSE Chemistry Revision Guide, CGP GCSE Biology Revision Guide, CGP GCSE Physics Revision Guide

Useful weblinks:

<https://www.educake.co.uk/>, <https://www.senecalearning.com/>,
<https://www.bbc.com/bitesize/levels/z98jmp3>,
<https://www.aqa.org.uk/subjects/science/gcse>

Extracurricular and enrichment:

Year 11 invited revision group, Year 10 invited revision group, Key stage four drop in revision (3 times a week), Year 7 science club, Key stage three drop in revision and support, Key stage three invited intervention group. There are also various trips and visits run through the year.

Spiritual, Moral, Social and Cultural opportunities:

Various topics across the curriculum in key stage three and four provide lots of opportunities for this.

Character development and British Values opportunities:

Various topics across the curriculum in key stage three and four provide lots of opportunities for this.