

Science Department Curriculum Map 2021-22

Intent:
 The Science curriculum aims to:

- Enable pupils to build on and develop the necessary skills to analyse and question the world around them in a critical way.
- Develop their practical skills by working scientifically, and, in doing so, provide opportunities for pupils to think and act like scientists do in the real world, to prepare them for their future learning or employment.
- Equip our students with the scientific knowledge and skills that are needed to understand the important role Science plays in society, both now and in the future, addressing any misconceptions they may have.
- Educate our pupils about key issues in science, including climate change, finding alternatives to using finite resources, the ethics of cloning, COVID-19, and lifestyle choices that impact our health.
- To make links between the different subject areas, and have understanding of the 'big' ideas' underpinning the curriculum
- Give our pupils a heightened awareness about the need for greater sustainability in all that we do as individuals and collectively to ensure the safekeeping of our planet for future generations, helping them to understand the essential role they will play in this.

Term	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1	Summer 2
Year 7	<u>Enquiry processes</u> <u>Waves</u> Sound <u>Forces</u> Speed Gravity <u>Matter</u> Particle model	Assessment 1	<u>Matter</u> Separating mixtures <u>Organisms</u> Movement Cells	Assessment 2	<u>Electromagnets</u> Potential difference and resistance Current <u>Reactions</u> Acids and alkalis Metals and non-metals	Assessment 3	<u>Earth –</u> Earth structure Universe <u>Energy –</u> Energy transfers Energy costs	Assessment 3	<u>Ecosystems</u> Interdependence Plant reproduction <u>Waves</u> Sound Light	<u>Genes</u> Variation Human reproduction
	<u>Enquiry processes</u> <u>Waves</u> Sound Light <u>Earth</u> Earth structure Universe		<u>Genes</u> Variation <u>Matter</u> Elements Periodic table		<u>Forces</u> Contact forces Pressure <u>Organisms</u> Breathing Digestion		<u>Electromagnets</u> Magnetism Electromagnets <u>Reactions</u> Types of reaction Chemical energy		<u>Energy</u> Work Heating and cooling <u>Ecosystems</u> Respiration Photosynthesis <u>Earth</u> Climate Earth's resources	<u>Waves</u> Wave effects Wave properties <u>Genes</u> Evolution Inheritance

Year 9	B3.1 New technology C3.1 New technology P3.1 New technology	Assessment 1	B3.2 Turning points in Biology C3.2 Turning points in Chemistry	Assessment 2	P3.2 Turning points in Physics B3.3 Detection	C3.3 Detection P3.3 Detection	Assessment 3	Space Project B1 Cell structure	C1 Atomic structure P1 Conservation and dissipation of energy
Year 10 CS	<u>Biology</u> B1 Cell structure B2 Cell division B3 Organisation and the digestive system B4 Organising animals and plants <u>Chemistry</u> C1 Atomic structure C2 The Periodic Table	Assessment 1	<u>Chemistry</u> C3 Structure and bonding <u>Physics</u> P1 Conservation and dissipation of energy	Assessment 2	<u>Physics</u> P2 Energy transfer by heating P3 Energy resources <u>Biology:</u> B5 Communicable diseases B6 Preventing and treating disease	<u>Biology:</u> B7 Non-communicable diseases <u>Chemistry</u> C4 Chemical calculations C5 Chemical changes <u>Physics:</u> P4 Electric circuits	Assessment 3	<u>Physics</u> P5 Electricity in the home <u>Biology:</u> B8 Photosynthesis B9 Respiration <u>Chemistry</u> C6 Electrolysis	<u>Chemistry</u> C7 Energy changes <u>Physics:</u> P6 Molecules and matter P7 Radioactivity <u>Biology:</u> B10 The human nervous system <u>Chemistry</u> C8 Rates and equilibrium
Year 10 TS	<u>Biology:</u> B1 Cell structure B2 Cell division B3 Organisation and the digestive system B4 Organising animals and plants <u>Chemistry:</u> C1 Atomic structure C2 The Periodic Table	Assessment 1	<u>Chemistry:</u> C3 Structure and bonding <u>Physics:</u> P1 Conservation and dissipation of energy P2 Energy transfer by heating	Assessment 2	<u>Physics:</u> P3 Energy resources <u>Biology:</u> B5 Communicable diseases B6 Preventing and treating disease B7 Non-communicable diseases	<u>Chemistry:</u> C4 Chemical calculations C5 Chemical changes <u>Physics:</u> P4 Electric circuits P5 Electricity in the home	Assessment 3	<u>Biology:</u> B8 Photosynthesis B9 Respiration <u>Chemistry:</u> C6 Electrolysis C7 Energy changes <u>Physics:</u> P6 Molecules and matter P7 Radioactivity	<u>Physics:</u> P7 Radioactivity <u>Biology:</u> B10 The human nervous system B11 Hormonal coordination

<p>Year 11 CS</p>	<p>Physics: P7 Radioactivity P8 Forces in balance P9 Motion P10 Force and motion</p> <p>Biology: B10 The human nervous system B11 Hormonal coordination</p>	<p>Mock Exam 1</p>	<p>Biology: B13 Reproduction B14 Variation and evolution B15 Genetics and evolution</p> <p>Chemistry: C12 Chemical analysis C13 The Earth's atmosphere</p>	<p>Mock Exam 2</p>	<p>Physics: 12 Wave properties P13 Electromagnetic waves P15 Electromagnetism</p> <p>Biology: B16 Adaptations, interdependence and competition B17 Organising an ecosystem</p>	<p>Biology: B18 Biodiversity and ecosystems</p> <p>Chemistry: C14 The Earth's resources</p>	<p>Mock Exam 3</p>	<p><u>Revision and Recap, practice papers and exams</u></p>
<p>Year 11 TS</p>	<p>Physics: P7 Radioactivity P8 Forces in balance P9 Motion P10 Force and motion P11 Force and pressure</p>	<p>Mock Exam 1</p>	<p>Biology: B13 Reproduction B14 Variation and evolution B15 Genetics and evolution</p> <p>Chemistry: C12 Chemical analysis C13 The Earth's atmosphere</p>	<p>Mock Exam 2</p>	<p>Physics: 12 Wave properties P13 Electromagnetic waves P14 Light P15 Electromagnetism P16 Space</p>	<p>Biology: B16 Adaptations, interdependence and competition B17 Organising an ecosystem B18 Biodiversity and ecosystems</p> <p>Chemistry: C14 The Earth's resources C15 Using our resources</p>	<p>Mock Exam 3</p>	<p><u>Revision and Recap, practice papers and exams</u></p>