Science Department Curriculum Map 2023-24

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	Assessment 1	Autumn 2	Assessment 2	Spring 1	Spring 2	Assessment 3	Summer 1	Summer 2
Year 7	**Enquiry processes** **Forces** Speed Gravity **Matter** Particle model Separating mixtures		**Organisms** Movement Cells **Electromagnets** Potential difference and resistance		**Electromagnets** Current **Reactions** Acids and alkalis Metals and non-metals	**Earth –** Earth structure Universe **Energy –** Energy transfers Energy costs		**Ecosystems** Interdependence Plant reproduction **Genes** Variation Human reproduction	**Exams** End of Year **Waves** Sound Light
Year 8	**Enquiry processes** **Waves** Sound Light **Matter** Elements Periodic table		**Forces** Contact forces Pressure **Organisms** Breathing Digestion		**Electromagnets** Magnetism Electromagnets **Reactions** Types of reaction Chemical energy	**Energy** Work Heating and cooling **Ecosystems** Respiration Photosynthesis		**Earth** Climate Earth's resources **Waves** Wave effects Wave properties	**Genes** Evolution Inheritance

Year 9	B3.1 New technology C3.1 New technology	**Assessment 1**	P3.1 New technology B3.2 Turning points in Biology	**Assessment 2**	C3.2 Turning points in Chemistry	P3.2 Turning points in Physics B3.3 Detection	**Assessment 3**	C3.3 Detection	P3.3 Detection Space Project
Year 10 CS	**Biology** B1 Cell structure B2 Cell division B3 Organisation and the digestive system B4 Organising animals and plants	**Assessment 1**	**Chemistry** C1 Atomic structure C2 The Periodic Table C3 Structure and bonding **Physics** P1 Conservation and dissipation of energy	**Assessment 2**	**Biology:** B5 Communicable diseases **Physics** P2 Energy transfer by heating P3 Energy resources	**Biology:** B6 Preventing and treating disease B7 Non-communicable diseases **Chemistry** C4 Chemical calculations C5 Chemical changes	**Assessment 3**	**Biology:** B8 Photosynthesis B9 Respiration **Physics** P4 Electric circuits P5 Electricity in the home **Chemistry** C6 Electrolysis	**Chemistry** C7 Energy changes **Physics:** P6 Molecules and matter P7 Radioactivity
Year 10 TS	**Biology:** B1 Cell structure B2 Cell division B3 Organisation and the digestive system B4 Organising animals and plants **Chemistry:** C1 Atomic structure C2 The Periodic Table	**Assessment 1**	**Biology:** B5 Communicable diseases **Chemistry:** C3 Structure and bonding **Physics:** P1 Conservation and dissipation of energy P2 Energy transfer by heating P3 Energy resources	**Assessment 2**	**Biology:** B6 Preventing and treating disease B7 Non-communicable diseases **Chemistry:** C4 Chemical calculations C5 Chemical changes	**Biology:** B8 Photosynthesis B9 Respiration **Physics:** P4 Electric circuits P5 Electricity in the home	**Assessment 3**	**Chemistry:** C6 Electrolysis C7 Energy changes **Physics:** P6 Molecules and matter P7 Radioactivity	**Biology:** B10 The human nervous system B11 Hormonal coordination **Physics:** P8 Forces in balance

Year 11 CS	**Biology:** **B8 Photosynthesis** **B9 Respiration** **Chemistry:** **C6 Electrolysis** **C7 Energy changes** **Physics:** **P4 Electric circuits** **P5 Electricity in the home**	**Mock Exam 1**	**Biology:** **B10 The human nervous system** **B11 Hormonal coordination** **B13 Reproduction** **Physics:** **P7 Radioactivity** **P8 Forces in balance** **P9 Motion** **P10 Force and motion**	**Mock Exam 2**	**Biology:** **B14 Variation and evolution** **B15 Genetics and evolution** **Chemistry:** **C8 Rates and equilibrium** **C9 Crude oil and fuels** **C12 Chemical analysis**	**Biology:** **B16 Adaptations, interdependence and competition** **B17 Organising an ecosystem** **B18 Biodiversity and ecosystems** **Chemistry:** **C13 The Earth's atmosphere** **C14 The Earth's resources** **Physics:** **12 Wave properties** **P13 Electromagnetic waves** **P15 Electromagnetism**	**Mock Exam 3**	**Revision and Recap, practice papers and exams**
Year 11 TS	**Biology:** **B10 The human nervous system** **B11 Hormonal coordination** **Physics:** **P7 Radioactivity** **P8 Forces in balance** **P9 Motion** **P10 Force and motion** **P11 Force and pressure**	**Mock Exam 1**	**Biology:** **B12 Homeostasis in action** **Chemistry:** **C8 Rates and equilibrium** **C9 Crude oil and fuels** **C10 Organic reactions** **C11 Polymers** **Physics:** **12 Wave properties** **P13 Electromagnetic waves**	**Mock Exam 2**	**Biology:** **B13 Reproduction** **B14 Variation and evolution** **B15 Genetics and evolution** **Physics:** **P14 Light** **P15 Electromagnetism** **P16 Space**	**Biology:** **B16 Adaptations, interdependence and competition** **B17 Organising an ecosystem** **B18 Biodiversity and ecosystems** **Chemistry:** **C12 Chemical analysis** **C13 The Earth's atmosphere** **C14 The Earth's resources** **C15 Using our resources**	**Mock Exam 3**	**Revision and Recap, practice papers and exams**