

Curriculum Map: Year 7 Science 2021-2022 onwards

	Half term 1 and 2	Half term 3 and 4	Half term 5 and 6
Topics	<ol style="list-style-type: none"> 1. Skills 2. Cells 3. Particle Model 4. Forces 	<ol style="list-style-type: none"> 1. Reproduction and Inheritance 2. Separating mixtures 3. Energy transfer 	<ol style="list-style-type: none"> 1. Chemical reactions 2. Variation & Evolution 3. Acids & Alkalis 4. Constant force & pressure 5. Space
Intent	<i>To learn key knowledge about cells, particles and forces and develop key skills.</i>	<i>To learn key knowledge about reproduction and inheritance, separating mixtures, energy transfer and develop key skills.</i>	<i>Learn key knowledge about chemical reactions, variation and evolution, acids and alkalis, constant force and pressure, and space and develop key skills.</i>
Key Knowledge	<ol style="list-style-type: none"> 1. Safety in the lab and in introduction to planning a scientific investigation 2. How cells are the fundamental unit of a living organisms 3. How particles are arranged in the three states of matter 4. What forces are and how they interact 	<ol style="list-style-type: none"> 1. How the human reproductive system works 2. How we separate mixtures 3. How energy can be transferred in a system 	<ol style="list-style-type: none"> 1. How we represent chemical reactions 2. How variation occurs and the theory of evolution 3. How acids and alkalis/bases can be used to make salts 4. How constant force can impact the shape of an object and how pressure changes in different mediums 5. Our solar system, day, night and the seasons
Key Skills	<p>Use scientific vocabulary, terminology and definitions. Plan an investigation, make and record observations and measurements using a range of apparatus and methods. Draw reasoned conclusions from data. Use equations to calculate values and covert units. Develop oracy, research and extended writing skills.</p>	<p>Use scientific vocabulary, terminology and definitions. Carry out experiments safely, make and record observations and measurements. Make decisions based on the evidence from case studies and go onto evaluating the evidence. Develop oracy, research and extended writing skills.</p>	<p>Use scientific vocabulary, terminology and definitions. Carry out experiments safely, make and record observations and measurements using a range of apparatus. Present data using tables/graphs. Draw reasoned conclusions from data. Use equations to calculate values and covert units. Use models to explain abstract concepts Develop oracy, research and extended writing skills</p>
Key Vocabulary	cell membrane, cell wall, cytoplasm, vacuole, chloroplasts, nucleus, ribosomes, mitochondria, organelles, tissues, organs, organ systems, solids, liquids, gases, particles, forces, gravity, air resistance, mass, weight, friction, upthrust, resultant force, streamlined	gametes, fertilisation, pregnancy, menstrual cycle, genes, foetus, chromosomes, genetic diseases, solutions, distillation, filtration, evaporation, crystallisation, chromatography, sound energy, light energy, thermal energy, chemical energy, electrical energy, kinetic energy, elastic potential energy, gravitational potential energy	reactant, product, conservation of mass, environmental variation, genetic variation, adaptation, natural selection, evolution, indicator, neutralisation, corrosive, stretch, compress, force, Hooke's Law, elastic limit, pressure, Sun, Earth, solar system, gravity
Key Reading	BBC Bite Size website/Revision guide	BBC Bite Size website/Revision guide	BBC Bite Size website/Revision guide
End Point	Students will learn about lab safety, equipment and an introduction to planning scientific investigations. Students will be able to access and complete exam style questions to demonstrate their learning in cell biology, the particle model and forces.	Students will be able to access and complete exam style questions to demonstrate their learning in reproduction and inheritance, in separating mixtures and how energy is transferred.	Students will be able to access and complete exam style questions to demonstrate their learning in chemical reactions, variation and evolution, constant force and pressure Use models to describe the solar system, seasons, night and day
Form of Assessment	Baseline assessment End of topic assessments for topics 2-4	End of topic assessments 1-3	End of topic assessments 1-4 DC2
Enrichment Opportunities			

Leadership Opportunities

Students to complete one project each term, which is to be presented to the whole class. Students will work independently over a few weeks to research and the topic. This will help students to develop their oracy, research and time management skills.