



Curriculum Map

Subject: Science

Year group: 7

	Science skills (autumn 1)	Biology	Chemistry	Physics
<p>Content</p> <p><i>Declarative Knowledge – ‘Know What’</i></p>	<p>Science skills - knowing how to work safely in the laboratory and understand what science is. Understanding how science is all around us and how it relates to me.</p>	<p>B1 Cells - what is a cell within plants and animals B2 Body systems - understanding some of the different systems in the body B3 Reproductive systems - understanding human and plant reproduction</p>	<p>C1 Particles - what is a particle and how they make up compounds. C2 Elements, atoms and compounds - how the periodic table has formed our understanding of elements C3 Reactions - what a chemical reaction is and how to recognise a reaction. C4 Acids and Alkalis - what acids and alkalis are and how they react.</p>	<p>P1 Forces - How forces interact and help form the world around us. P2 Sound - what sound and sound waves are and their uses P3 Light - How we perceive light and light waves. P4 Space - understanding planets, orbits and the solar system.</p>
<p>Skills</p> <p><i>Procedural Knowledge – ‘Know How’</i></p>	<ul style="list-style-type: none"> Lab safety - recognising hazards in science Variables - what am I changing? what am I measuring, what is staying the same? Graph skills - how to draw to good chart. 	<ul style="list-style-type: none"> How to use a microscope What the different parts of the body are in different body systems Understanding the reproductive cycle and birth Understanding the menstrual cycle Flower dissection 	<ul style="list-style-type: none"> Equipment handling Lab safety - recap Observations of reactions Measuring reactions. Recording and analysing data Planning and evaluation of experimental methods - naming variables Making predictions 	<ul style="list-style-type: none"> Manipulation of maths equations Problem solving Investigating springs Use of protractors in light refraction Investigating friction Making predictions
<p>Key Questions</p>	<ol style="list-style-type: none"> How can we be safe in the laboratory? What is science and how does it relate to me? 	<p>B1 - What is a cell? What are the components, and differences between plant and animal cells? What is a single celled organism? What is diffusion? B2 - What systems is the body comprised of?</p>	<p>C1 - What is an element? What is a particle? What is the difference between solids, liquids and gases? C2 - What is a compound? C3 - How can I tell a reaction has occurred? What is diffusion? C4 - What are acids and alkalis?</p>	<p>P1 - What is a force? What can forces do? How do forces work together? P2 - What is a wave? What makes sounds different? What is an echo and how do we use them? How does the ear work? P3 - How does light get reflected and refracted?</p>



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		<p>How do bones and muscles interact? B3 -What is puberty? What is reproduction? How is a baby made? What is menstruation? How do plants reproduce?</p>		<p>How does the eye make a picture? What are colours? P4 - What is space? Why do we have seasons? What is in the solar system? How does the earth move through space? How do we get phases of the moon? What causes eclipses?</p>
Assessment	Year 7 baseline assessment.	End of unit tests and extending writing task (one per topic).	End of unit tests and extending writing task (one per topic).	End of unit tests and extending writing task (one per topic).
Literacy/Numeracy/ SMSC/Character	<p>Numeracy - presenting data, drawing graphs Literacy - understanding written instructions. Extended writing tasks SMSC - pair and group working, working in a safe way in a laboratory</p> <p>Character Integrity: during practical work Resilience: using equations and data handling Confidence: participation in classroom discussions</p>	<p>Numeracy - graphs Literacy - Labelling diagrams correctly, extended writing tasks SMSC - pair work</p> <p>Character Integrity: during practical work Resilience: using equations and data handling Confidence: participation in classroom discussions</p>	<p>Numeracy - graphs, calculating mean values. Mode, mean and median. Literacy - Comprehension of instructions. Extended writing tasks. SMSC - pair work</p> <p>Character Integrity: during practical work Resilience: using equations and data handling Confidence: participation in classroom discussions</p>	<p>Numeracy - Maths using equations and using and understanding protractors Graphing Literacy - extended writing tasks SMSC - pair work</p> <p>Character Integrity: during practical work Resilience: using equations and data handling Confidence: participation in classroom discussions</p>