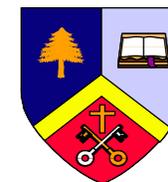


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	Autumn	Spring	Summer
Year 3	<p><b>Skeletons and movement (6 weeks)</b>  <i>Key question: Why do we have a skeleton?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: skeletons protect vital organs</li> <li>Knowledge block 2: skeletons support weight</li> <li>Knowledge block 3: skeletons support movement</li> </ul> <p><b>solids, liquids and gases (7 weeks)</b>  <i>Key question: How can I identify materials based on their properties?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: properties of solids, liquids and gases</li> <li>Knowledge block 2: changing state</li> <li>Knowledge block 3: melting, freezing, boiling and condensation temperatures</li> <li>Knowledge block 4: what happens at the melting temperature?</li> </ul>	<p><b>Rocks and soils (6 weeks)</b>  <i>Key question: What is the earth made from?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1 The properties of rocks</li> <li>Knowledge block 2 The structure of soils</li> </ul> <p><b>Light (6 weeks)</b>  <i>Key question: Why can you see your reflection in a mirror but not the floor?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: light and sight</li> <li>Knowledge block 2: what light does when it hits materials</li> </ul>	<p><b>Plants and their food production (7weeks)</b>  <i>Key question: How do plants make their food?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: plants don't go to McDonalds</li> </ul> <p><b>Magnets and their effects (6 weeks)</b>  <i>Key question: What is a magnet?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: what magnets do</li> <li>Knowledge block 2: magnets don't need to touch</li> <li>Knowledge block 3: magnets attract and repel</li> <li>Knowledge block 4: what affects magnet strength?</li> </ul>
	<p>Linking knowledge of animal survival and life cycles, children will learn about the differences between vertebrates and invertebrates. Building on that knowledge, they will explore how important skeletons are to protect, support and help us move.</p>	<p>Building on KS1 learning about seasons and how light changes. Children will continue their journey by learning how light is everywhere and be able to define light sources. Through investigation, they will understand what happens as light hits different materials.</p>	<p>Building on knowledge of push and pull forces from KS1; children will investigate magnets in terms of their magnetic force and learn about their uses in the wider world.</p> <p>Building on their KS1 knowledge of plants, children will learn how plants make food from the things</p>



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	Building on their learning of materials in KS1, children will investigate materials properties, being able to define them in new ways such as solid, liquid or a gas. In investigating the world around them, including looking at the water cycle, they will understand the change in state of melting, boiling and freezing.	Linking knowledge with plants from KS1, the children will learn about how the earth is made of rock and the importance of different types of rock and soil to help sustain our environment they link this to their geographical work on volcanoes and learn about the different rocks they contain.	that they need to grow and how they can help in creating an environmentally friendly environment.
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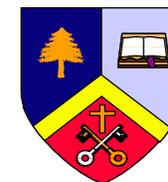
**Long-Term Study: Shadows**

***How does my shadow length change throughout the year?***

Year 3 will make use of a range of equipment to take accurate measurements of their shadows in autumn, winter, spring and summer. They will investigate how the length of their shadow changes throughout the day and in different seasons.

Link to Science Curriculum: Light

	Autumn	Spring	Summer
Year 4	<p><b>Living things (6 sessions)</b> <i>Key question: What is classification?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: classifying living things</li> <li>Knowledge block 2: life cycles</li> <li>Knowledge block 3: environmental change</li> </ul> <p><b>Making electrical circuits work (6 weeks)</b> <i>Key question: What are electric circuits and how do they work?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: electricity as a power sources</li> </ul>	<p><b>Digestion (7 weeks)</b> <i>Key question: how does the body get nutrients into the blood stream?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: food groups</li> <li>Knowledge block 2: variation in diet</li> <li>Knowledge block 3: how humans digest food</li> </ul> <p><b>Mixtures and Separating them (8 weeks)</b> <i>Key question: What are mixtures and how can they be separated?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 2: what mixtures are</li> </ul>	<p><b>Plant reproduction (7 weeks)</b> <i>Key question: How do plants reproduce?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: reproductive parts of flowering plants</li> <li>Knowledge block 2: all flowers are similar but different</li> <li>Knowledge block 3: seed dispersal</li> <li>Knowledge block 4: what does a seed do?</li> </ul>



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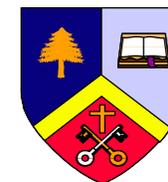
	<ul style="list-style-type: none"> <li>• Knowledge block 2: what do batteries do?</li> <li>• Knowledge block 3: making devices work harder</li> <li>• Knowledge block 4: insulators and conductors</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge block 2: what dissolving is</li> <li>• Knowledge block 3: separating mixtures.</li> </ul>	
	<p>Building on their work on plants in both year 3 and 4, children will make links to different life cycles that occur. They will consider the impact of our activity on the environment. They will learn to classify different organisms and the importance of every animal in the food chain.</p> <p>Investigating circuits, children will learn that batteries provide energy for things to work. They will address how we move forwards into an ever-changing world and look at how they can make a change in what they do.</p>	<p>Building on their KS1 knowledge of 'this is me', children will learn how nutrients get into the body, how they are used in the body and how they are excreted.</p> <p>Building on year 3 knowledge of solids, liquids and gases the children will investigate mixtures and how they are separated, realising that the world around them is full of science.</p>	<p>Building on their year 3 knowledge of how plants make their food they will look at how they reproduce, how seeds are transferred and the importance of that in our food chain.</p>

**Long Term Study: Environment Study**

***What impact do humans have on the local environment?***

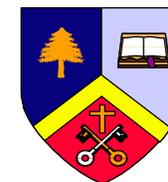
Year 4 will conduct an impact study of the ladybird infestation that occurs in our building. They will undertake fieldwork, using maps and observations over time. Using their findings, they will investigate the impact of removing the ladybirds and the affect this could have on the school environment and biodiversity.

Link to Science Curriculum: Living things and their habit



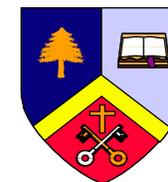
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	Autumn	Spring	Summer
Year 5	<p><b>Space and gravity (8 weeks)</b>  <i>Key question: What is the Earth's address in space?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: Our solar system</li> <li>Knowledge block 2: What else is in the solar system?</li> <li>Knowledge block 3: Gravity and its effects</li> </ul> <p><b>Forces that oppose motion (8weeks)</b>  <i>Key question: How and why do things move?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: water and air resistance</li> <li>Knowledge block 2: friction</li> <li>Knowledge block 3: managing forces</li> </ul>	<p><b>Forces that oppose motion (8weeks)</b>  <i>Key question: How and why do things move?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: water and air resistance</li> <li>Knowledge block 2: friction</li> <li>Knowledge block 3 managing forces</li> </ul> <p><b>Sound</b>  <i>Key question: how is sound produced?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: describing sound</li> <li>Knowledge block 2: how sound is made and how it travels</li> <li>Knowledge block 3: pitch and volume changes</li> </ul>	<p><b>Sound</b>  <i>Key question: how is sound produced?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: describing sound</li> <li>Knowledge block 2: how sound is made and how it travels</li> <li>Knowledge block 3: pitch and volume changes</li> </ul> <p><b>Circulation- (7 weeks)</b>  <i>Key question: How do nutrients get to where they are needed in the body?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: getting oxygen into the blood</li> <li>Knowledge block 2: the blood circulation model</li> </ul>
	<p>As part of the unit on space, children will be fully immersed in discovering our amazing solar system, supported by the text drivers: Curiosity and The Race to Space. They will learn about other objects in our solar system and the impact of gravity.</p> <p>Building on magnets and forces from year 3, and space and gravity from the previous unit, children will learn about different types of forces - how</p>	<p>Linking to our music curriculum, children will investigate how sound is produced and how it travels through different media and how they can affect its pitch and volume.</p>	<p>Building on the digestive system in year 4, children will learn about the circulatory system. Through their study of Ancient Egypt, they will make links to stories from the past, including the process of mummification as they learn how oxygen gets into the blood and how blood is circulated throughout our whole body.</p>



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	they affect every day activities and how we can manage them.		
<p><b>Long Term Study: Night-time Sky</b>  <b>What is in the sky at night?</b></p> <p>Year 5 will make use of first-hand evidence, including star charts and photographs to analyse the phases of the moon, light pollution and constellation change. Year 5 will investigate how the night sky changes over Farnborough throughout the year.</p> <p>Link to Science Curriculum: Earth and space</p>			
<p><b>Year 6</b></p>	<p><b>Making new substances (8 weeks)</b>  <i>Key question: How are new substances made?</i></p> <ul style="list-style-type: none"> <li>Knowledge block: reversible and irreversible changes.</li> </ul> <p><b>Controlling electrical circuits (8 weeks)</b>  <i>Key question: How can electrical circuits be controlled?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: pushing electrical current</li> <li>Knowledge block 2: electrical current</li> <li>Knowledge block 3: electrical resistance</li> </ul>	<p><b>Fossils, geological time and classification (4 weeks)</b>  <i>Key question: What is evolution and how do we know it happened?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: geological time.</li> <li>Knowledge block 2: evolution for evidence</li> <li>Knowledge block 3: classification of life</li> </ul> <p><b>Classification and evolution (7 weeks)</b>  <i>Key question: How does evolution happen?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: natural selection</li> <li>Knowledge block 2: how Charles Darwin discovered the process of evolution by natural selection.</li> </ul>	<p><b>How light behaves (7 weeks)</b>  <i>Key question: Why does my shadow change length?</i></p> <ul style="list-style-type: none"> <li>Knowledge block 1: how light travels</li> <li>Knowledge block 2: how light behaves when it hits an object</li> <li>Knowledge block 3: how we see</li> </ul>



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	<p>Building on their knowledge of solids and liquids from year 3 and separating substances from year 4, the children will develop ideas of irreversible and reversible change.</p> <p>Building on their learning about circuits from year 3, children in year 6 will develop their knowledge of current and resistance - learning how they can be used to control the circuits they produce.</p>	<p>As part of their project about how small changes can make a big difference, children will use science as their key driver to discover the work and learning of Charles Darwin, supported by 'The Lost Words' by Robert Macfarlane and Charles Darwin's 'On The Origin of Species' by Sabina Radeva. They will discover how life on our planet has evolved and what an important role we have as guardians of its future.</p>	<p>Building on their learning about light and sight in year 3, children will deepen their understanding and knowledge of how light behaves when it hits an object. They will extend their key terms, looking at the physics of light and how it behaves.</p>
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**Long Term Study: Measuring Ourselves**

***How much do we grow over the year?***

Year 6 will measure their height, arm length, hand span and foot length each term. At the end of the year, they will calculate how much they have grown and compare their individual growth to the growth of the class.

Link to Science Curriculum: Evolution and inheritance