

# SCIENCE Subject Overview 2023.24

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2	
Year 6	<p><b>Heart, blood and circulation</b>            Why do we need a healthy heart?            What are the components and functions of our blood?            How can we lead a healthy lifestyle?</p> <p><b>Working scientifically:</b>            -I can plan different types of scientific enquiry to answer questions (including recognizing and controlling variables).            -I can report and present findings from enquiries in oral and written forms such as displays and other presentations.            -I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.            -I can explain how far I trust results found.            -I can test results to make predictions to set up further comparative and fair tests.</p>	<p><b>Investigating light</b>            How does light travel?            How does light help us see?            Why do shadows have the same shape as the objects that cast them?</p> <p><b>Working scientifically:</b>            -I can plan different types of scientific enquiry to answer questions (including recognizing and controlling variables).            -I can report and present findings from enquiries in oral and written forms such as displays and other presentations.            -I can identify scientific evidence that has been used to support or refute ideas and arguments.</p>	<p><b>Evolution and Inheritance</b>            How did Darwin impact the world of science?            What is fossilisation and how did it inform Darwin's Theory of Evolution?            What are inherited characteristics?            What is adaptation and how may it lead to evolution?</p> <p><b>Working scientifically:</b>            -I can plan different types of scientific enquiry to answer questions (including recognizing and controlling variables).            -I can identify scientific evidence that has been used to support or refute ideas and arguments.</p>	<p><b>Electricity and electrical circuits</b>            How does the voltage in a circuit affect the brightness of a bulb or volume of a buzzer?            Can I use universal symbols to represent a simple circuit in a diagram?</p> <p><b>Working scientifically:</b>            -I can plan different types of scientific enquires to answer questions (including recognizing and controlling variables).            -I can report and present findings from enquiries in oral and written forms such as displays and other presentations.            -I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.            -I can explain how far I trust results found.            -I can test results to make predictions to set up further comparative and fair tests.</p>	<p><b>Living things and their habitats</b>  <b>Classification</b>            How and why are living things classified?            Who was Carl Linnaeus?            How does the Linnaean System help us to classify living things?            Can I classify living things using the Linnaean System?</p> <p><b>Working scientifically:</b>            -I can identify scientific evidence that has been used to support or refute ideas and arguments.            -I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p>		

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<p><b>Year 5</b></p>	<p><b>Earth and Space</b> What is the relative distance between the planets? How big are the planets in relation to one another?</p> <p><b>Working scientifically:</b> -I can identify scientific evidence that has been used to support or refute ideas and arguments.</p>	<p><b>Forces</b> How can we find out if objects fall at the same pace? What affects the speed of a falling object?</p> <p><b>Working scientifically:</b> -I can take measurements, using a range of scientific equipment, with increasing accuracy, taking repeat readings when appropriate. -I can record data and results of increasing complexity using tables, scatter graphs, bar and line graphs.</p>	<p><b>Materials – Materials and their properties</b> How can you classify different materials? What are the properties of a solid, a liquid and a gas?</p> <p><b>Working scientifically:</b> -I can record data and results of increasing complexity, using tables, scatter graphs, bar and line graphs.</p>	<p><b>Materials – Changing states / Dissolving, evaporating, filtering, sieving and separating materials</b> Are changes in state reversible or irreversible?</p> <p>What are solutions and mixtures?</p> <p><b>Working scientifically:</b> -I can use results to draw conclusions and explain how things happen.</p>	<p><b>Living Things – life cycles and reproduction</b> How do different life forms develop? What are the differences and similarities?</p> <p><b>Working scientifically:</b> -I can report and present findings from enquiries in oral and written forms such as displays and other presentations.</p>	<p><b>Humans and animals</b> What changes does a human go through? How do gestation periods for other animals compare?</p> <p><b>Working scientifically:</b> -I can report and present findings from enquiries in oral and written forms such as displays and other presentations.</p>
<p><b>Year 4</b></p>	<p><b>Living Things and Their Habitats</b> How can living things be grouped? How can we identify and name living things? How can people change the environment?</p> <p><b>Working scientifically:</b> -I can gather, record, classify and present data in a variety of ways to help in answering questions.</p>	<p><b>Light and Shadows</b> What do we need to see? How is light reflected? How are shadows formed? How can shadows change size?</p> <p><b>Working scientifically:</b> -I can use simple scientific evidence to answer questions or to support my findings.</p>	<p><b>Famous Inventors and Electricity</b> Who discovered electricity? Which appliances use electricity How can we create and draw a simple circuit? What does a switch do? What are conductors and insulators?</p> <p><b>Working scientifically:</b> -I can record findings using simple scientific language, drawings, labelled diagrams, keys, bars charts and tables.</p>	<p><b>States of Matter</b> Can we group materials into solids, liquids or gases? What happens when some materials are heated or cooled? What temperature does this happen at? What is evaporation and condensation and how does temperature affect the rate of evaporation?</p> <p><b>Working scientifically:</b> -I can identify differences, similarities or changes related to simple scientific ideas and processes.</p>	<p><b>Teeth and the Digestion System</b> What is the digestive system and how does it work in humans? What types of teeth do humans have and why? What is a food chain?</p> <p><b>Working scientifically:</b> -I can set up simple practical enquiries, comparative and fair tests. -I can record findings using simple scientific language, drawings, labelled diagrams, keys, bars charts and tables.</p>	

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<p><b>Year 3</b></p>	<p><b>Rocks and soils</b>            How can I compare and group together different kinds of rocks based on their appearance and simple physical properties?            How are fossils formed?            Who was Mary Anning?            What is soil made from and are they all the same?</p> <p><b>Working scientifically:</b>            -I can ask relevant questions.            -I can use different types of scientific enquiries to answer questions.            I can make careful and organized observations.</p>	<p><b>Forces and magnets</b>            How do things move on different surfaces?            Do all forces need contact between 2 objects?            Which materials are attracted to a magnet?            What are the poles of a magnet, and can I predict whether 2 magnets will attract or repel each other, depending on which poles are facing?</p> <p><b>Working scientifically:</b>            -I can set up simple practical enquiries, comparative and fair tests.            -I can use results to draw simple conclusions, make predictions for new values, suggest improvements and add further questions.</p>	<p><b>Animals inc humans</b>            What is nutrition? What is a healthy diet for a human?            Do all animals need the same kind of nutrition?            What is a skeleton and why do we have one?            Do other animals have skeletons, and are there different types of skeletons?</p> <p><b>Working scientifically:</b>            -I can use simple scientific evidence to answer questions or support my findings.            -I can gather, record, classify and present data in a variety of ways to help in answering questions.</p>	<p><b>Sound</b>            How is sound made?            What is the relationship between the pitch of a sound and the features of the object that produced it?            What is the relationship between the volume of a sound and the strength of the vibrations that produced it?            How can we make sound fainter?</p> <p><b>Working scientifically:</b>            -I can set up simple practical enquiries, comparative and fair tests.            -I can take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p>	<p><b>Plants</b>            What are the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers?            What does a plant need to live and grow healthily?            How is water transported within plants?            What part do flowers play in the life cycle of flowering plants? (Pollination, seed formation and seed dispersal.)</p> <p><b>Working scientifically:</b>            -I can make careful and organised observations</p>
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<p><b>Year 2</b></p>	<p><b>Uses of Everyday Materials</b>            Scientist – John Dunlop</p> <p>Can I identify different materials?            What are different materials used for?            Why are some materials used for certain things?            How can we change the shape of some materials?            Who is John Dunlop?</p> <p><b>Working scientifically:</b>            -I can perform simple tests to find things out.            -I can use my observations and ideas to suggest answers to questions.            -I can gather and record data (information) to help in answering questions.            -I can identify and classify (sort) living and non-living things.</p>	<p><b>Living things and their habitats</b>            Can I identify living, dead and things that haven't been alive?            What is a habitat?            Are all habitats the same?            Can I name some habitats and plants and animals that live there?            What is a food chain?            Can I give an example of a food chain?            What is a predator?            What is prey?            What do living things need to survive and grow?</p> <p><b>Working scientifically:</b>            -I can recognise that questions can be answered in different ways.            -I can observe closely, using simple equipment (like magnifying glasses).            -I can use my observations and ideas to suggest answers to questions.            -I can gather and record data (information) to help in answering questions.            -I can identify and classify (sort) living and non-living things.</p> <p><b>Animals including Humans</b>            What do all living things need in order to survive?            How does a baby become an adult?            How can I be healthy?            What do I need to eat?            When we exercise, why does our heart beat fast?</p> <p><b>Working scientifically:</b>            -I can recognise that questions can be answered in different ways.            -I can perform simple tests to find things out.            -I can use my observations and ideas to suggest answers to questions.</p>	<p><b>Plants</b>            How do seeds and grow into mature plants?            What do plants need to grow and stay healthy?</p> <p><b>Working scientifically:</b>            -I can recognise that questions can be answered in different ways.            -I can perform simple tests to find things out.            -I can observe closely, using simple equipment (like magnifying glasses).            -I can gather and record data (information) to help in answering questions.</p>

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<p><b>YEAR 1</b></p>	<p><b>Materials</b>            Can I distinguish between an object and the material from which it is made?            Can I identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock?            Can I describe the simple physical properties of a variety of everyday materials?            Can I compare and group together a variety of everyday materials on the basis of their simple physical properties?</p> <p><b>Working scientifically:</b></p> <ul style="list-style-type: none"> <li>-I can ask simple questions.</li> <li>-I can perform simple tests to find things out.</li> <li>- I can make a prediction for a simple test: What is the best material to keep a dinosaur dry?</li> </ul>	<p><b>Seasonal changes-Autumn</b>            Can I identify the features of Autumn?            Can I identify evergreen and deciduous trees?</p> <p><b>Working scientifically:</b></p> <ul style="list-style-type: none"> <li>- I can observe closely, using simple equipment (like magnifying glasses).</li> </ul> <p><b>Animals including humans</b>            Can I identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense?</p> <p><b>Working scientifically:</b></p> <ul style="list-style-type: none"> <li>-I can use my observations to suggest answers to questions.</li> <li>-I can recognize that questions can be answered in different ways.</li> </ul>	<p><b>Seasonal changes-Winter</b>            Can I identify the features of Winter?</p> <p><b>Working scientifically:</b></p> <ul style="list-style-type: none"> <li>- I can observe closely, using simple equipment (like magnifying glasses).</li> </ul> <p><b>Animals</b>            Can I identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals?            Can I identify and name a variety of common animals that are carnivores, herbivores and omnivores?            Can I describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)?            Can I identify and classify different types of animals?</p> <p><b>Working scientifically:</b></p> <ul style="list-style-type: none"> <li>-I can use my observations to suggest answers to questions.</li> <li>-I can recognize that questions can be answered in different ways.</li> </ul>	<p><b>Plants</b>            Can I identify and name a variety of common wild and garden plants, including deciduous and evergreen trees?            Can I identify and describe the basic structure of a variety of common flowering plants, including trees?</p> <p><b>Working scientifically:</b></p> <ul style="list-style-type: none"> <li>- I can observe closely, using simple equipment (like magnifying glasses).</li> </ul> <ul style="list-style-type: none"> <li>-I can use equipment to dissect a plant.</li> </ul> <p>I can write a scientific conclusion.</p>	<p><b>Seasonal changes-Spring</b>            Can I identify the features of Spring?</p> <p><b>Working scientifically:</b></p> <ul style="list-style-type: none"> <li>- I can observe closely, using simple equipment (like magnifying glasses).</li> </ul>	<p><b>Seasonal changes-Summer</b>            Can I identify the features of Summer?</p> <p><b>Working scientifically:</b></p> <ul style="list-style-type: none"> <li>- I can observe closely, using simple equipment (like magnifying glasses).</li> <li>- I can use my observations to suggest answers to questions.</li> </ul> <p>Link to local geography – trees in the school grounds.</p>
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EYFS	<p>The Natural World ELG</p> <ul style="list-style-type: none"><li>• Explore the natural world around them.</li><li>• Begin to understand the need to respect and care for the natural environment and all living things</li></ul>		<p>The Natural World ELG</p> <ul style="list-style-type: none"><li>• Explore the natural world around them.</li><li>• Plant seeds and care for growing plants.</li><li>• Understand the key features of the life cycle of a plant and an animal.</li><li>• Begin to understand the need to respect and care for the natural environment and all living things</li></ul>
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