

# Science Long term Curriculum Map Knowledge

	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
<b>EYFS Science Taken from ELG</b>	<p><b>Topic 1: Me and my small world</b> <b>Development Matters - Reception</b></p> <ul style="list-style-type: none"> <li>Explore the natural world around them.</li> </ul> <p><b>Topic 2: What's in my basket?</b> <b>Development Matters - 3 and 4-year-olds</b></p> <ul style="list-style-type: none"> <li>Talk about the differences between materials and changes they notice.</li> <li>Children investigate and experience things</li> </ul>	<p><b>Topic 1: Senses</b> <b>Development Matters - Reception</b></p> <ul style="list-style-type: none"> <li>Explore the natural world around them.</li> </ul> <p><b>Topic 2: Let's go outside</b> <b>Development Matters - Reception</b></p> <ul style="list-style-type: none"> <li>Explore the natural world around them.</li> <li>Describe what they see, hear and feel whilst outside.</li> <li>Understand the effect of changing seasons on the natural world around them differences, patterns and change in nature</li> </ul>	<p><b>Topic 1: What's changed?</b> <b>Development Matters - 3 and 4-year-olds</b></p> <ul style="list-style-type: none"> <li>Talk about the differences between materials and changes they notice.</li> <li>investigate and experience things.</li> <li>Talk about what they have done and found out.</li> </ul> <p><b>Topic 2: Night and day</b> <b>Development Matters - Reception</b></p> <ul style="list-style-type: none"> <li>Understand the effect of changing seasons on the natural world around them</li> </ul>	<p><b>Topic 1: Changes in Winter</b> <b>Development Matters - Reception</b></p> <ul style="list-style-type: none"> <li>Understand the effect of changing seasons on the natural world around them.</li> <li>Children investigate and experience things</li> <li>Notices similarities, difference and changes</li> </ul> <p><b>Topic 2: Let it flow</b> <b>Development Matters - 3 and 4-year-olds</b></p> <ul style="list-style-type: none"> <li>Talk about the differences between materials and changes they notice.</li> </ul>	<p><b>Topic 1: From desert to jungle</b> <b>Development Matters - Reception</b></p> <ul style="list-style-type: none"> <li>Recognise some environments that are different from the one in which they live.</li> </ul> <p><b>Topic 2: Watch it grow</b> <b>Development Matters - 3 and 4-year-olds</b></p> <ul style="list-style-type: none"> <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> </ul> <p><b>Development Matters - Reception</b></p> <ul style="list-style-type: none"> <li>Explore the natural world around them.</li> </ul>	<p><b>Topic 1: Animal detectives</b> <b>Development Matters - 3 and 4-year-olds</b></p> <ul style="list-style-type: none"> <li>Begin to understand the need to respect and care for the natural environment and all living things.</li> <li><b>Reception</b> - Recognise some environments that are different from the one in which they live.</li> </ul> <p><b>Topic 2: Pushes and pulls</b> <b>Development Matters - 3 and 4-year-olds</b></p> <ul style="list-style-type: none"> <li>Explore how things work.</li> <li>Explore and talk about different forces they can feel.</li> </ul>

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						<b>Development Matters - Reception</b> <ul style="list-style-type: none"> <li>• Describe what they see, hear and feel whilst outside.</li> <li>• Explore and test their own ideas</li> </ul>
<b>Year 1 Science:</b>	<b>Animals including humans</b> The Human Body Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	<b>Seasonal Changes</b> Observe changes across the four seasons. (Autumn and winter)  Observe and describe weather associated with the seasons and how day length varies.  <b>Everyday Materials</b> Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and	<b>Animals including humans</b> Identify and name a variety of common animals, including fish, amphibians, reptiles, birds and mammals.  Identify and name a variety of common animals that are carnivores, herbivores and omnivores.  Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and	<b>Seasonal Changes</b> Observe changes across the four seasons. (Spring)  Observe and describe weather associated with the seasons and how day length varies	<b>Plants</b> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and describe the basic structure of a variety of common flowering plants, including trees	<b>Seasonal changes</b> Observe changes across four seasons. (Summer)  Observe and describe weather associated with the seasons and how day length varies

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		rock. Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties.	mammals including pets			
<b>Year 2 Science:</b>	<p><b>Animals including humans.</b> Describe the basic needs of animals, including humans, for survival.</p> <p>Describe the importance for humans of exercise, eating healthily and hygiene.</p>	<p><b>Animals including humans.</b> Notice that animals including humans have offspring which grows into adults.</p> <p><b>Uses of everyday materials.</b> Identify and compare the suitability of everyday materials for particular uses.</p>	<p><b>Uses of everyday materials.</b> Identify and compare the suitability of everyday materials for particular uses.</p> <p>Find out how the shapes of solid objects can be changed.</p> <p><b>Plants.</b> Investigate what plants need to grow and stay healthy.</p>	<p><b>Plants.</b> Observe and describe how seeds and bulbs grow into mature plants.</p>	<p><b>Living things and their habitats.</b> Identify habitats and how they provide the needs for different animals and plants.</p> <p>Name a variety of plants and animals in their habitats and micro-habitats.</p>	<p><b>Living things and their habitats.</b> Exploring the difference between things that are living, dead and have never been alive.</p> <p>Describe food chains.</p>

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<p><b>Year 3 Science:</b></p>	<p><b>Animals including Humans</b> Identify that humans and some animals have skeletons and muscles for support, movement and protection.</p>	<p><b>Animals including humans</b> Identify that animals, including humans, need the right types and amounts of nutrition, and they cannot make their own food; they get nutrition from what they eat.</p> <p><b>Rocks</b> Compare and group together different kinds of rocks based on their appearance and simple physical properties.</p>	<p><b>Rocks</b> Describe in simple terms how fossils are formed when living things that have lived are trapped within rock.</p> <p>Recognise that soils are made rocks and organic matter.</p>	<p><b>Light</b> Recognise that they need light in order to see things and that dark is the absence of light.</p> <p>Notice that light is reflected from surfaces.</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect the eyes.</p> <p>Recognise that shadows are formed when the light from a light source is blocked.</p> <p>Find patterns in the way that the size of shadows can change.</p>	<p><b>Plants</b> Identify and describe the functions of different parts of a flowering plant.</p> <p>Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.</p> <p>Investigate the way water is transported within plants.</p> <p>Explore the part that flowers play in the life cycle of a flowering plants, including pollination, seed formation and seed dispersal.</p>	<p><b>Forces and magnets</b> Compare how things move on different surfaces.</p> <p>Notice that some forces need contact, but magnetic forces can act at a distance.</p> <p>Observe how magnets attract and repel some materials and not others.</p> <p>Compare and group together a variety of everyday materials on the basis of whether they attracted to a magnet, and identify some magnetic materials.</p> <p>Describe magnets as having two poles.</p>
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<b>Year 4 Science:</b>	<p><b>Living Things and their habitats</b> Recognise that living things can be grouped in a variety of ways.</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p>	<p><b>States of Matter</b> Compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate</p>	<p><b>Sound</b> Identify how sounds are made, associating some of them with something vibrating.</p> <p>Recognise that vibrations from sounds travel through a medium to the ear.</p> <p>Find patterns between the pitch of a sound and features of the object that produced it.</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it.</p>	<p><b>Electricity</b> Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.</p> <p>Recognise that a switch opens and</p>	<p><b>Living things and their habitats</b> Recognise that living things can be grouped in a variety of ways.</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p><b>Animals including humans</b> Describe the functions of the digestive system in humans.</p> <p>Identify the different types of teeth and their functions.</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>

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		of evaporation with temperature.	Recognise that sounds get fainter as the distance from the sound source increases.	closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors.		
<b>Year 5 Science:</b>	<p><b>Forces</b> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.</p>	<p><b>Earth and Space</b> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</p> <p>Describe the movement of the Moon relative to the Earth.</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies.</p>	<p><b>Properties and changes of materials</b> Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.</p> <p>Know that some materials will</p>		<p><b>Living things and their habitats</b> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the life process of reproduction in some plants and animals.</p>	<p><b>Animals including humans</b> describe the changes as humans develop to old age. (puberty and the changes that happen to boys and girls)</p>

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	<p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	<p>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p>	<p>dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p>Explain that some changes result in</p>			
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			the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.			
<b>Year 6 Science:</b>	<p><b>Light</b> Recognise that light appears travels in straight lines.</p> <p>Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.</p> <p>Explain that we see things because light travels from light sources to our eyes or from light sources to objects</p>	<p><b>Animals including humans</b> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</p> <p>Recognise impact of diet, exercise, drugs and lifestyle on the way their bodies function.</p> <p>Describe the ways in which nutrients are transported</p>	<p><b>Electricity</b> Associate the brightness of a lamp or the volume of a buzzer with the number voltage of cells used in the circuit.</p> <p>Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.</p>	<p><b>Evolution and Inheritance</b> Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p>		<p><b>Living things and their habitats</b> Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>



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	<p>and then to our eyes.</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>	<p>within animals, including humans.</p>	<p>Use recognised symbols when representing a simple circuit in a diagram.</p>	<p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>		
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