

# Science Curriculum

Chesterfield Primary School



# Science Overview – EYFS progression of skills

Explore the natural world around them, making observations and drawing pictures of animals and plants

	3 & 4 year olds	Reception	ELG	Provisions	Link to <u>Yr 1</u>
UW	Begin to understand the need to respect and care for the natural environment and living things	Explore the natural world around them	Explore the natural world around them, making observations and drawing pictures of animals and plants	Forest School Outdoor areas Pictures of animals Plants to create process/observational art Photos to explore Outdoor investigation areas Magnifying glasses <u>etc</u> for investigation	<b>Science</b> Identify and describe plants and animals (including humans)
	Talk about what they see using a wide vocabulary	Describe what they see, hear, feel whilst outside			
	Plant seeds and care for growing plants  Understand the key features of the life cycle of a plant and an animal				

Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter

	3 & 4 year olds	Reception	ELG	Provisions	Link to Yr 1
UW		Explore the effect of changing seasons on the natural world around them e.g. weather, plants, animals etc.	Understand some important processes and changes in the natural world around them- Seasons	Investigation stations Materials both natural and man-made to explore and discuss	<b>Science</b> Working scientifically  Materials
	Explore collections of materials with similar/ different properties  Talk about the differences between materials and the changes they notice  Talk about forces they can feel		Understand some important processes and changes in the natural world around them- changing states	Explore forces in everyday life	

# Science Overview – EYFS

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	<p><b>All about me</b></p> <ul style="list-style-type: none"> <li>Knows some of the things that make them unique, and can talk about some of the similarities and differences in relation to friends or family</li> <li>Personal hygiene</li> <li>Using senses to explore</li> </ul>	<p><b>My favourite things</b></p> <ul style="list-style-type: none"> <li>Talks about why things happen and how things work.</li> <li>Shows an interest in technological toys with knobs or pulleys</li> <li>Seasonal changes – autumn.</li> </ul>	<p><b>Amazing animal</b></p> <ul style="list-style-type: none"> <li>Can talk about some of the things they have observed such as plants, animals, natural and found objects.</li> <li>Developing an understanding of growth, decay and changes over time.</li> <li>Shows care and concern for living things and the environment.</li> <li>How do we care for an animal?</li> <li>How can animals help us?</li> <li>Seasonal changes – winter.</li> </ul>	<p><b>Magic garden</b></p> <ul style="list-style-type: none"> <li>Talks about why things happen and how things work.</li> <li>Developing an understanding of growth, decay and changes over time.</li> <li>Shows care and concern for living things and the environment.</li> <li>Talking about healthy foods.</li> <li>How do we care for the garden?</li> <li>Seasonal changes – spring.</li> </ul>	<p><b>Big, strong, healthy me</b></p> <ul style="list-style-type: none"> <li>Uses various construction materials.</li> <li>Talk about differences between materials.</li> <li>Observe the effects of activity on their bodies</li> </ul>	<p><b>Tell me a story!</b></p> <ul style="list-style-type: none"> <li>Talking about changes that have happened through the year and upcoming changes – e.g. going to “big school”.</li> <li>Observe the effects of activity on their bodies.</li> <li>Seasonal changes – summer.</li> </ul>
Reception	<p><b>All about me</b></p> <ul style="list-style-type: none"> <li>Talk about what makes us special.</li> <li>Discuss caring for plants in the playground.</li> <li>Look at how things work in the classroom.</li> <li>Children will explore the EYFS environment using all of their senses.</li> </ul>	<p><b>Colour, light and festivals</b></p> <ul style="list-style-type: none"> <li>Explore and be able to talk about seasonal changes - with a focus on autumn.</li> <li>Light and dark activities</li> </ul>	<p><b>Transport</b></p> <ul style="list-style-type: none"> <li>Why is it good to walk sometimes? What other types of transport can give us exercise?</li> <li>Use tools to effect changes to materials</li> <li>Exploring which vehicles move fast and which move slowly.</li> <li>Similarities and differences between vehicles.</li> <li>Exploring ramps</li> <li>Explore and be able to talk about seasonal changes - with a focus on winter.</li> </ul>	<p><b>The world and people around us!</b></p> <ul style="list-style-type: none"> <li>Explore and be able to talk about seasonal changes - with a focus on spring.</li> <li>Explore the natural world.</li> <li>Making observations and asking questions.</li> </ul>	<p><b>Let's go outside!</b></p> <ul style="list-style-type: none"> <li>Looking after the environment</li> <li>Planting</li> <li>Life cycles of various creatures and changes over time.</li> <li>Animal habitats and environments.</li> </ul>	<p><b>What do we eat?</b></p> <ul style="list-style-type: none"> <li>Developing an understanding of growth, decay and changes over time.</li> <li>Healthy diets</li> <li>Exploring changes in state (melting, boiling) whilst cooking</li> <li>Planting</li> <li>Explore and be able to talk about seasonal changes - with a focus on summer.</li> </ul>

**Taught across the year**  
 Materials – what materials are best to make a car or boat? Junk modelling and creative activities  
 Food – Cooking where possible with discussions about changes in state / heating / cooling.



# Science Overview with approximate weekly guide to lessons

Autumn 1 = 7 weeks, Autumn 2 = 7 weeks, Spring 1 = 6 weeks, Spring 2 = 6 weeks,  
Summer 1 = 6 weeks, Summer 2 = 7 weeks

	Autumn 1 (1)	Autumn 2 (2)	Spring 1 (3)	Spring 2 (4)	Summer 1 (5)	Summer 2 (6)
Year 1	Animals including humans (humans) 3 weeks  Plants 4 weeks	Seasonal Change 3 weeks  Animals including humans 4 weeks	Everyday materials 4 weeks  Seasonal changes 2 weeks	Seasonal changes 3 weeks (includes planting of seeds)  Everyday materials 3 weeks	Animals including humans (not humans) 4 weeks  Seasonal changes 2 weeks	Plants 5 weeks  Seasonal changes 2 weeks
Year 2	Uses of everyday materials 5 weeks  Living things and their habitats 2 weeks	Animals including humans (humans) 5 weeks  Plants 2 weeks	Living things and their habitats 6 weeks	Animals including humans (animals) 2 weeks  Plants 4 weeks	Living things and their habitats 3 weeks  Plants 3 weeks	Uses of everyday materials 4 weeks  Plants 3 weeks
Year 3	Rocks 7 weeks	Light 4 weeks  Plants 3 weeks	Animals including humans (muscles and skeleton) 6 weeks	Plants 4 weeks  Animals including humans (nutrition) 2 weeks	Light 3 weeks  Plants 3 weeks	Forces and Magnets 7 weeks
Year 4	Living things and their habitats 1 week  States of matter 6 weeks	Animals including humans 7 weeks	Electricity 5 weeks  Living things and their habitats 1 week	Sound 6 weeks	Living things and their habitats 6 weeks	Animals including humans (food chains) 7 weeks  (Use some time here for the edible playground or as revision of a previous topic taught)
Year 5	Living things and their habitats 2 weeks  Properties and changes of materials 5 weeks	Living things and their habitats 1 week  Forces 6 weeks	Forces 4 weeks  Living things and their habitat 2 weeks	Earth and space 5 weeks  Living things and their habitats 1 week	Living things and their habitats 3 weeks  Properties and changes of materials 3 weeks	Animals including humans 7 weeks
Year 6	Living things and their habitats 2 weeks  Electricity 5 weeks	Evolution and inheritance 7 weeks	Animals including humans 3 weeks  Light 3 weeks	Animals including humans 6 weeks	Living things and their habitats 5 weeks  Animals including humans 1 week	Living things and their habitats 3 weeks  Light 4 weeks

# Science Overview – KS1

Numbers in brackets refer to which point from the national curriculum is covered.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Animals including humans (4)  Plants (2)	Seasonal Change Autumn (1+2)  Animals including humans (1+2)	Everyday materials (1+2)  Seasonal changes Spring (1*+2*)	Seasonal changes Spring (1*+2*)  Everyday materials (3+4)	Animals including humans (1*,2*,3)  Seasonal changes Summer (1*+2*)	Plants (1,2*)  Seasonal changes Summer (1*+2*)
Year 2	Uses of everyday materials (1+2 – link to LQ D&T)  Living things and their habitats (1)	Animals including humans – humans (1,2,3)  Plants – plant a bulb (1)	Living things and their habitats - habitats locally (2,3,4)	Animals including humans – animals (1,2)  Plants- plant seeds (1*+2)	Living things and their habitats – micro-habitats locally and internationally (2,3,4)  Plants - (1*,2*)	Uses of everyday materials (1*+2* – link to LQ D&T)  Plants (1*,2*)

\* means recap prior learning and expand further.



# Working Scientifically KS1

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content.

1. Asking simple questions and recognising that they can be answered in different ways
2. Performing simple tests
3. Observing closely, using simple equipment
4. Gathering and recording data to help in answering questions.
5. Identifying and classifying
6. Using their observations and ideas to suggest answers to questions

# Science Overview – LKS2

Numbers in brackets refer to which point from the national curriculum is covered.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	Rocks (1,2,3)	Light (1,2,3)  Plants (1+2)	Animals including humans (2)	Plants (2*+3)  Animals including humans (1)	Light (4+5)  Plants (1*,2*,3*,4)	Forces and Magnets (1,2,3,4,5,6)
Year 4	Living things and their habitats (3^)  States of matter (1,2,3)	Animals including humans (1+2)	Electricity (1,2,3,4,5)  Living things and their habitats (3^)	Sound (1,2,3,4,5)	Living things and their habitats (1,2,3^)	Animals including humans (3)  (Revision of a previous topic or edible playground)

^Year 4 to follow an animal across the year and track the habitat changes

- means recap prior learning and expand further.

Revision in summer 2 to be at teachers discretion – time can be used for experiments or edible playground – evidence of lessons taught needs to be collected.



# Working Scientifically LKS2

During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content.

1. Asking relevant questions and using different types of scientific enquiries to answer them
2. Setting up simple practical enquiries, comparative and fair test
3. Making systematic and careful observations and, where appropriate, taking accurate measurement using standard units, using a range of equipment, including thermometers and data loggers
4. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
5. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables
6. Reporting on findings from enquiries, including oral and written explanation, displays or presentations of results and conclusions
7. Identifying differences, similarities or changes related to simple scientific ideas and processes
8. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
9. Using straightforward scientific evidence to answer questions or to support their findings.

# Science Overview – UKS2

Numbers in brackets refer to which point from the national curriculum is covered.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	<p>Living things and their habitats - plants (2)</p> <p>Properties and changes of materials (1,2,3,5,6)</p>	<p>Living things and their habitats – amphibian (1)</p> <p>Forces (1,2)</p>	<p>Forces (2,3)</p> <p>Living things and their habitat – insect (1*)</p>	<p>Earth and space (1,2,3,4)</p> <p>Living things and their habitats - birds (1*)</p>	<p>Living things and their habitats – mammals (1*) and animals (2)</p> <p>Properties and changes of materials (1*, 4)</p>	<p>Animals including humans (1)</p>
Year 6	<p>Living things and their habitats – plants (1,2)</p> <p>Electricity (1,2,3)</p>	<p>Evolution and inheritance (1,2,3)</p>	<p>Animals including humans (1 (identify), 2)</p> <p>Light (1,2,3)</p>	<p>Animals including humans (1* (describe) 2^,3)</p>	<p>Living things and their habitats – animals (1,2)</p> <p>Animals including humans (2^)</p>	<p>Living things and their habitats – microorganisms (1,2)</p> <p>Light (1*,2*,3*,4)</p>

\* means recap prior learning and expand further (In year 5 comparing to the next life cycle as you go along)

^ means achieved through pulse rate experiments

# Working Scientifically UKS2

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content.

1. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
2. Using test results to make predictions to set up further comparative and fair tests
3. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
4. Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
5. Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degrees of trust in results, in oral and written forms such a displays and other presentations
6. Identifying scientific evidence that has been used to support or refute ideas or arguments

# Science Overview – Year 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	<b>Animals including humans</b> <ul style="list-style-type: none"> <li>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</li> </ul>	<b>Seasonal Change (Autumn)</b> <ul style="list-style-type: none"> <li>Observe changes across the four seasons.</li> <li>Observe and describe weather associated with the seasons and describe how day length varies.</li> </ul>	<b>Everyday materials</b> <ul style="list-style-type: none"> <li>Distinguish between an object and the material from which it is made.</li> <li>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.</li> </ul>	<b>Seasonal changes (Spring - Planting)</b> <ul style="list-style-type: none"> <li>Observe changes across the four seasons.</li> <li>Observe and describe weather associated with the seasons and describe how day length varies.</li> <li><i>Include planting of seeds</i></li> </ul>	<b>Animals including humans</b> <ul style="list-style-type: none"> <li><i>Recap prior learning</i></li> <li>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</li> </ul>	<b>Plants</b> <ul style="list-style-type: none"> <li><i>Recap prior learning</i></li> <li>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</li> <li><i>Planting and looking at Edible playground.</i></li> </ul>
	<b>Plants</b> <ul style="list-style-type: none"> <li>Identify and describe the basic structure of a variety of common flowering plants, including trees.</li> </ul>	<b>Animals including humans</b> <ul style="list-style-type: none"> <li>Identify and name a variety of common animals including: fish, amphibians, reptiles, birds and animals.</li> <li>Identify and name a variety of common animals that are carnivores, herbivores, omnivores.</li> </ul>	<b>Seasonal changes (Spring)</b> <ul style="list-style-type: none"> <li>Observe changes across the four seasons.</li> <li>Observe and describe weather associated with the seasons and describe how day length varies.</li> </ul>	<b>Everyday materials</b> <ul style="list-style-type: none"> <li>Describe the simple physical properties of a variety of everyday materials.</li> <li>Compare and group together a variety of everyday materials on the basis of their simple physical properties.</li> </ul>	<b>Seasonal changes (summer)</b> <ul style="list-style-type: none"> <li>I can identify changes across the four seasons.</li> <li>I can observe and describe weather associated with the seasons.</li> <li>I can observe and describe how day length varies.</li> </ul>	<b>Seasonal changes (summer)</b> <ul style="list-style-type: none"> <li>Observe changes across the four seasons.</li> <li>Observe and describe weather associated with the seasons and describe how day length varies.</li> </ul>

# Science Overview – Year 2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 2	<b>Uses of everyday materials</b> <ul style="list-style-type: none"> <li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul>	<b>Animals including humans (Focus on humans)</b> <ul style="list-style-type: none"> <li>Humans have offspring which grow into adults</li> <li>Find out about the basic needs of humans for survival (water, food and air)</li> <li>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</li> </ul>	<b>Living things and their habitats (Familiar and less familiar habitats)</b> <ul style="list-style-type: none"> <li><i>Recap prior learning</i></li> <li>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for their basic needs of different kind of animals and plants.</li> <li>Identify and name a variety of plants and animals in their habitats</li> <li>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</li> </ul>	<b>Animals including humans (Focus on animals)</b> <ul style="list-style-type: none"> <li>Animals have offspring which grow into adults</li> <li>Find out about and describe the basic needs of animals for survival (water, food and air)</li> </ul>	<b>Living things and their habitats (Focus on micro-habitats)</b> <ul style="list-style-type: none"> <li><i>Recap prior learning</i></li> <li>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for their basic needs of different kind of animals and plants.</li> <li>Identify and name a variety of plants and animals that live in micro-habitats</li> <li>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</li> </ul>	<b>Uses of everyday materials</b> <ul style="list-style-type: none"> <li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul>
	<b>Living things and their habitats</b> <ul style="list-style-type: none"> <li>Explore and compare the differences between things that are living, dead and things that have never been alive.</li> </ul>	<b>Plants</b> <i>Plant bulbs</i> <ul style="list-style-type: none"> <li>Observe and describe how seeds and bulbs grow into mature plants</li> </ul>		<b>Plants</b> <ul style="list-style-type: none"> <li><i>Recap prior learning</i></li> <li>Observe and describe how seeds and bulbs grow into mature plants</li> <li>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>	<b>Plants</b> <ul style="list-style-type: none"> <li><i>Recap prior learning – use edible playground for lessons</i></li> <li>Observe and describe how seeds and bulbs grow into mature plants</li> <li>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>	<b>Plants</b> <ul style="list-style-type: none"> <li><i>Recap prior learning</i></li> <li>Observe and describe how seeds and bulbs grow into mature plants</li> <li>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>

# Science Overview – Year 3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	<b>Rocks</b> <ul style="list-style-type: none"> <li>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> <li>Describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> <li>Recognise that soils are made from rocks and organic matter</li> </ul>	<b>Light</b> <ul style="list-style-type: none"> <li>Recognise that they need light in order to see things and that dark is the absence of light</li> <li>Notice that light is reflected from surfaces</li> <li>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes</li> </ul>	<b>Animals including humans (muscles and skeletons)</b> <ul style="list-style-type: none"> <li>Identify that humans and some other animals have skeletons and muscles for support, protection and movement</li> </ul>	<b>Plants</b> <ul style="list-style-type: none"> <li>Explore the requirements of plants for life and growth and how they vary from plant to plant.</li> <li>Investigate the ways in which water is transported within plants</li> </ul>	<b>Light</b> <ul style="list-style-type: none"> <li>Recap prior learning</li> <li>Recognise that shadows are formed when the light from a light source is blocked by an opaque object.</li> <li>Find patterns in the way that the size of shadows change</li> </ul>	<b>Forces and Magnets</b> <ul style="list-style-type: none"> <li>Compare how things move on different surfaces</li> <li>Notice that some forces need contact between two objects, but magnetic forces can act at a distance.</li> <li>Observe how magnets attract or repel each other and attract some materials and not others</li> <li>Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet and identify some magnetic materials</li> <li>Describe magnets as having two poles</li> <li>Predict whether two magnets will attract or repel each other, depending on which poles are facing</li> </ul>
		<b>Plants</b> <ul style="list-style-type: none"> <li>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</li> <li>Explore the requirements of plants for life and growth and how they vary from plant to plant.</li> </ul>		<b>Animals including humans (nutrition)</b> <ul style="list-style-type: none"> <li>Identify that animals, including humans, need the right types and amount of nutrition and that they cannot make their own food; they get nutrition from what they eat.</li> </ul>	<b>Plants</b> <ul style="list-style-type: none"> <li>Recap prior learning</li> <li>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</li> <li>Investigate the ways in which water is transported within plants</li> <li>Explore the requirements of plants for life and growth and how they vary from plant to plant.</li> <li>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</li> </ul>	

# Science Overview – Year 4

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 4	<b>Living things and their habitats</b> <ul style="list-style-type: none"> <li>Recognise that environments can change and that this can sometimes pose dangers to living things</li> <li><i>Follow an animal across the year and track the habitat changes</i></li> </ul>	<b>Animals including humans</b> <ul style="list-style-type: none"> <li>Describe the simple functions of the basic parts of the digestive system in humans.</li> <li>Identify the different types of teeth in humans and their simple functions.</li> </ul>	<b>Electricity</b> <ul style="list-style-type: none"> <li>Identify common appliances that run on electricity</li> <li>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</li> <li>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</li> <li>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</li> <li>Recognise some common conductors and insulators, and associate metals with being good conductors.</li> </ul>	<b>Sound</b> <ul style="list-style-type: none"> <li>Identify how sounds are made, associating some of them with something vibrating</li> <li>Recognise that vibrations from sounds travel through a medium to the ear</li> <li>Find patterns between the pitch of a sound and features of the object that produced it</li> <li>Find patterns between the volume of a sound and the strength of the vibrations that produced it</li> <li>Recognise that sounds get fainter as the distance from the sound source increases.</li> </ul>	<b>Living things and their habitats</b> <ul style="list-style-type: none"> <li>Recognise that living things can be grouped in a variety of ways</li> <li>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environments</li> <li>Recognise that environments can change and that this can sometimes pose dangers to living things</li> <li><i>Follow an animal across the year and track the habitat changes</i></li> </ul>	<b>Animals including humans</b> <ul style="list-style-type: none"> <li>Construct and interpret a variety of food chains, identifying producers, predators and prey</li> </ul> <p>(Revision of a previous Year 4 topic or use of edible playground during any spare weeks).</p>
	<b>States of matter</b> <ul style="list-style-type: none"> <li>Compare and group materials together, according to whether they are solids, liquids or gases</li> <li>Observe that some materials change state when they are heated or cooler, and measure or research the temperature at which this happens in degrees Celsius (°C)</li> </ul>		<b>Living things and their habitats</b> <ul style="list-style-type: none"> <li>Recognise that environments can change and that this can sometimes pose dangers to living things</li> <li><i>Follow an animal across the year and track the habitat changes</i></li> </ul>			

# Science Overview – Year 5

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	<b>Living things and their habitats - plants</b> <ul style="list-style-type: none"> <li>Describe the life process of reproduction in plants.</li> </ul>	<b>Living things and their habitats – amphibian</b> <ul style="list-style-type: none"> <li>Describe the life cycles of an amphibian</li> </ul>	<b>Forces</b> <ul style="list-style-type: none"> <li>Identify the effects of water resistance and friction, that act between moving surfaces.</li> <li>Recognise that some mechanisms, including levers, pulleys and gears, allows a smaller force to have a greater effect.</li> </ul>	<b>Earth and space</b> <ul style="list-style-type: none"> <li>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</li> <li>Describe the movement of the Moon relative to the Earth.</li> <li>Describe the Sun, Earth and Moon as approximately spherical bodies.</li> <li>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</li> <li><i>Know that our Sun is a star.</i></li> </ul>	<b>Living things and their habitats – mammals and animals</b> <ul style="list-style-type: none"> <li>Describe the life process of reproduction in animals.</li> <li>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</li> </ul>	<b>Animals including humans</b> <ul style="list-style-type: none"> <li>Describe the changes as humans develop to old age.</li> </ul>
	<b>Properties and changes of materials</b> <ul style="list-style-type: none"> <li>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.</li> <li>Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution.</li> <li>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating..</li> <li>Demonstrate that dissolving, mixing and changes of state are reversible changes.</li> <li>Explain that some changes result in 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.</li> </ul>				<b>Properties and changes of materials</b> <ul style="list-style-type: none"> <li>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.</li> <li>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> </ul>	
		<b>Forces</b> <ul style="list-style-type: none"> <li>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling objects.</li> <li>Identify the effects of air resistance that act between moving surfaces.</li> </ul>	<b>Living things and their habitat – insect</b> <ul style="list-style-type: none"> <li>Describe the difference in the life cycles of an insect and an amphibian.</li> </ul>	<b>Living things and their habitats - birds</b> <ul style="list-style-type: none"> <li>Describe the differences in the life cycles of an insect, an amphibian and a bird</li> </ul>		

# Science Overview – Year 6

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 6	<b>Living things and their habitats</b> <ul style="list-style-type: none"> <li>Describe how living things are classified into broad groups: according to common observable characteristics and based on similarities and differences – <b>plants</b></li> <li>Give reasons for classifying plants based on specific characteristics.</li> </ul>	<b>Evolution and inheritance</b> <ul style="list-style-type: none"> <li>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</li> <li>Recognise that living things produce offspring of the same kind, but normally vary and are not identical to their parents.</li> <li>Identify how animals and plants are adapted to suit their environments in different ways and that adaption may lead to evolution.</li> </ul>	<b>Animals including humans</b> <ul style="list-style-type: none"> <li>Identify and name the main parts of the human circulatory system</li> <li>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</li> </ul>	<b>Animals including humans</b> <ul style="list-style-type: none"> <li>Describe the functions of the: heart, blood vessels, blood.</li> <li>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</li> <li>Describe the ways in which nutrients and water are transported within animals, including humans.</li> </ul>	<b>Living things and their habitats</b> <ul style="list-style-type: none"> <li>Describe how living things are classified into broad groups: according to common observable characteristics and based on similarities and differences – <b>animals</b></li> <li>Give reasons for classifying animals based on specific characteristics.</li> </ul>	<b>Living things and their habitats</b> <ul style="list-style-type: none"> <li>Describe how living things are classified into broad groups: according to common observable characteristics and based on similarities and differences – <b>micro-organisms</b></li> <li>Give reasons for classifying micro-organisms based on specific characteristics</li> </ul>
	<b>Electricity</b> <ul style="list-style-type: none"> <li>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</li> <li>Compare and give reasons for variations in how components functions, including: the brightness of bulbs, the loudness of buzzers, the on/off positions of switches.</li> <li>Use recognised symbols when representing a simple circuit in a diagram.</li> </ul>		<b>Light</b> <ul style="list-style-type: none"> <li>Recognise that light appear to travel in straight lines.</li> <li>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.</li> <li>Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.</li> </ul>		<b>Animals including humans</b> <ul style="list-style-type: none"> <li>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</li> </ul>	<b>Light</b> <ul style="list-style-type: none"> <li><i>Recap of prior learning</i></li> <li>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</li> </ul>

# Science Overview with connections

Horizontal – year group links  
Vertical – within science topics

	Autumn 1 (1)	Autumn 2 (2)	Spring 1 (3)	Spring 2 (4)	Summer 1 (5)	Summer 2 (6)
Year 1	Animals including humans (humans)  Plants	Seasonal Change  Animals including humans	Everyday materials  Seasonal changes Science 1:2	Seasonal changes Science 1:2, 1:3  Everyday materials Science 1:3	Animals including humans (not humans) Science 1:2  Seasonal changes Science 1:2, 1:3, 1:4	Plants Science 1:1  Seasonal changes Science 1:2, 1:3, 1:4, 1:5
			D&T link (1:3) Structures –designing playground equipment.	D&T link (1:3) Structures –designing playground equipment.	Geography link (1:5) Identify seasonal and daily weather patterns in the UK and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.	Geography link (1:5) Identify seasonal and daily weather patterns in the UK and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.
Year 2	Uses of everyday materials Science 1:3, 1:4  Living things and their habitats Science 1:1, 1:2, 1:5, 1:6	Animals including humans (humans)  Plants Science 1:1, 1:6	Living things and their habitats Science 1:1, 1:2, 1:5, 1:6 Science 2:1, 2:2	Animals including humans (animals) Science 1:2, 1:5 Science 2:2  Plants Science 1:1, 1:6 Science 2:2, 2:3	Living things and their habitats Science 1:1, 1:2, 1:5, 1:6 Science 2:1, 2:2, 2:3  Plants Science 1:1, 1:6 Science 2:2, 2:3, 2:4	Uses of everyday materials Science 1:3, 1:4 Science 2:1  Plants Science 1:1, 1:6 Science 2:2, 2:3, 2:4, 2:5
	D&T link (1:3) Structures –designing playground equipment.	D&T link (1:2) Food technology – fruit platter (healthy eating)  D&T link (2:1) Food technology – healthy wraps	Geography link (1:5) Identify seasonal and daily weather patterns in the UK and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.		Geography link (1:5) Identify seasonal and daily weather patterns in the UK and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.  Geography link (Yr 2) Name and locate the world's seven continents.	History link (Great fire of London 2:5) Events beyond living memory that are significantly nationally. Significant historical events, people and places in their own locality.  D&T link (1:3) Structures –designing playground equipment.  D&T link (2:4) Textiles –puppets

# Science Overview with connections

Horizontal – year group links  
Vertical – within science topics

	Autumn 1 (1)	Autumn 2 (2)	Spring 1 (3)	Spring 2 (4)	Summer 1 (5)	Summer 2 (6)
Year 3	<b>Rocks</b> Science 2:1, 2:6	<b>Light</b> Science 1:1  <b>Plants</b> Science 1:1, 1:6, 2:2, 2:3, 2:4, 2:5, 2:6	<b>Animals including humans (muscles and skeleton)</b>	<b>Plants</b> Science 1:1, 1:6, 2:2, 2:3, 2:4, 2:5, 2:6 <b>Science 3:2</b>  <b>Animals including humans (nutrition)</b> Science 2:2, 2:4	<b>Light</b> Science 1:1 <b>Science 3:2</b>  <b>Plants</b> Science 1:1, 1:6, 2:2, 2:3, 2:4, 2:5, 2:6 <b>Science 3:2, 3:4</b>	<b>Forces and Magnets</b> Science 2:1, 2:6
				<b>D&amp;T link (1:2)</b> Food technology – fruit platter (healthy eating)  <b>D&amp;T link (2:1)</b> Food technology – healthy wraps  <b>D&amp;T link (3:4)</b> Food technology – healthy savoury tarts		<b>D&amp;T link (1:6)</b> Sliders and levers  <b>D&amp;T link (2:2)</b> Mechanisms – wheels and axles  <b>D&amp;T link (3:6)</b> Mechanical systems – levers and linkages
Year 4	<b>Living things and their habitats</b> Science 2:3, 2:5, 3:4  <b>States of matter</b> Science 1:4, 2:1, 2:6	<b>Animals including humans</b> Science 1:1, 2:2, 2:4, 3:4	<b>Electricity</b> Science 3:2, 3:5  <b>Living things and their habitats</b> Science 2:3, 2:5, 3:4 <b>Science 4:1</b>	<b>Sound</b> Science 1:1	<b>Living things and their habitats</b> Science 1:1, 1:6, 2:2, 2:3, 2:4, 2:5, 2:6, 3:2, 3:4, 3:5 <b>Science 4:1, 4:3</b>	<b>Animals including humans (food chains)</b> Science 2:3, 2:5
	<b>Geography link (1:5)</b> Identify seasonal and daily weather patterns in the UK and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.  <b>Geography link (2)</b> Name and locate the world's continents and oceans.		<b>Geography link (1:5)</b> Identify seasonal and daily weather patterns in the UK and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.  <b>Geography link (2)</b> Name and locate the world's seven continents and 5 oceans.  <b>Geography link (4:2)</b> Describe and understand the key aspects of physical geography including climate zones, biomes and vegetation belts.		<b>Geography link (1:5)</b> Identify seasonal and daily weather patterns in the UK and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.  <b>Geography link (2)</b> Name and locate the world's seven continents and 5 oceans.  <b>Geography link (4:2)</b> Describe and understand the key aspects of physical geography including climate zones, biomes and vegetation belts.	

# Science Overview with connections

Horizontal – year group links  
Vertical – within science topics

	Autumn 1 (1)	Autumn 2 (2)	Spring 1 (3)	Spring 2 (4)	Summer 1 (5)	Summer 2 (6)
Year 5	<b>Living things and their habitats</b> Science 1:6, 2:2, 2:4, 2:6, 3:2, 3:4, 3:5, 4:5  <b>Properties and changes of materials</b> Science 1:3, 1:4, 2:1, 2:6, 3:5, 3:6, 4:1, 4:3	<b>Living things and their habitats</b> Science 2:3, 2:4, 3:4, 4:5 <b>Science 5:1</b>  <b>Forces</b> Science 2:1, 2:6, 3:6	<b>Forces</b> Science 2:1, 2:6, 3:6 <b>Science 5:2</b>  <b>Living things and their habitat</b> Science 2:3, 2:4, 3:4, 4:5 <b>Science 5:1, 5:2</b>	<b>Earth and space</b> Science 1:2, 1:3, 1:4, 1:5, 1:6, 3:2, 3:5 <b>Science 5:2, 5:3</b>  <b>Living things and their habitats</b> Science 2:3, 2:4, 3:4, 4:5 <b>Science 5:1, 5:2, 5:3</b>	<b>Living things and their habitats</b> Science 2:2, 2:3, 2:4, 3:4, 4:5 <b>Science 5:1, 5:2, 5:3, 5:4</b>  <b>Properties and changes of materials</b> Science 1:3, 1:4, 2:1, 2:6, 3:5, 3:6, 4:1, 4:3 <b>Science 5:1</b>	<b>Animals including humans</b> Science 2:2, 2:4, 3:3, 3:4
		<b>D&amp;T link (1:6)</b> Sliders and levers  <b>D&amp;T link (2:2)</b> Mechanisms – wheels and axles  <b>D&amp;T link (3:6)</b> Mechanical systems – levers and linkages	<b>D&amp;T link (1:6)</b> Sliders and levers  <b>D&amp;T link (2:4)</b> Mechanisms – wheels and axles  <b>D&amp;T link (3:6)</b> Mechanical systems – levers and linkages			
Year 6	<b>Living things and their habitats</b> Science 1:1, 1:6, 3:2, 3:5, 4:5  <b>Electricity</b> Science 4:3	<b>Evolution and inheritance</b> Science 2:2, 2:3, 2:4, 2:5, 3:4, 4:1, 4:3, 4:5	<b>Animals including humans</b> Science 1:1, 2:2, 2:4, 3:3, 3:4, 5:6 <b>D&amp;T 6:1</b>  <b>Light</b> Science 1:1, 3:2, 3:5	<b>Animals including humans</b> Science 1:1, 2:2, 2:4, 3:3, 3:4, 5:6 <b>Science 6:3</b>	<b>Living things and their habitats</b> Science 1:2, 1:5, 3:3, 4:5, 5:1, 5:2, 5:3, 5:4, 5:5 <b>Science 6:1</b>  <b>Animals including humans</b> Science 1:1, 2:2, 2:4, 3:3, 3:4, 5:6 <b>Science 6:3, 6:4</b>	<b>Living things and their habitats</b> <b>Science 6:1, 6:5</b>  <b>Light</b> Science 1:1, 3:2, 3:5 <b>Science 6:3</b>
	<b>D&amp;T link (4:6)</b> Electrical systems		<b>D&amp;T link (1:1)</b> Food technology – fruit platter (healthy eating)  <b>D&amp;T link (2:1)</b> Food technology – healthy wraps  <b>D&amp;T link (3:4)</b> Food technology – healthy savoury tarts  <b>D&amp;T link (4:2)</b> Food technology – biscuits  <b>D&amp;T link (5:1)</b> Food technology – bread  <b>D&amp;T link (6:1)</b> Food technology – traditional Greek food			