



Science Skills Overview							
Aspects	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Animals (inc Humans)</p> <p>EYFS</p> <p>Personal, Social and Emotional Development</p> <p>Managing Self</p> <p>The Natural World</p>	<p>Make healthy choices about food, drink, activity and tooth brushing</p> <p>Know and talk about the different factors that support their overall health and wellbeing:</p> <ul style="list-style-type: none"> - Regular physical activity - Healthy eating - Tooth-brushing - Sensible amount of 'screen time' - Having a good sleep routine - Being a safe pedestrian <p>Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</p> <p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p> <p>Understand the key features of the life cycle of a plant and animal</p> <p>Begin to understand the need to respect and care for the</p>	<p>-Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>-Group animals according to what they eat.</p> <p>-Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>- Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p>-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>-Understand that animals, including humans, have offspring which grow into adults</p> <p>- Describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>- Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</p>	<p>-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</p> <p>-Identify that humans and some other animals have skeletons and muscles for support, protection and movement</p>	<p>-Describe the simple functions of the basic parts of the digestive system in humans</p> <p>-Identify the different types of teeth in humans and their simple functions</p> <p>-Construct and interpret a variety of food chains, identifying producers, predators and prey</p>	<p>- Describe the changes as humans develop to old age</p>	<p>-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 the impact of diet, exercise, drugs and lifestyle on the way their bodies function</p> <p>-Describe the ways in which nutrients and water are transported within animals, including humans</p>

	natural environment and all living things						
Living Things and their Habitats EYFS Understanding The World	<p>-Explore the natural world around them</p> <p>-Describe what they see, hear and feel while they are outside</p> <p>Recognise some environments that are different to the one in which they live</p> <p>Begin to understand the need to respect and care for the natural environment and all living things</p> <p>Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class</p>		<p>-Explore and compare the differences between things that are living, dead, and things that have never been alive</p> <p>-Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</p> <p>-Identify and name a variety of plants and animals in their habitats, including micro-habitats</p> <p>-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</p>		<p>-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 and have an impact on living things</p>	<p>-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>-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>
Evolution and Inheritance	Begin to make sense of their own life story and family's history						<p>-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>

							-Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution
Plants EYFS The Natural World	<p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p> <p>Plant seeds and care for growing plants</p> <p>Understand the key features of the life cycle of a plant and animal</p> <p>Begin to understand the need to respect and care for the natural environment and all living things</p>	<p>-Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>-Identify and describe the basic structure of a variety of common flowering plants, including trees</p>	<p>-Observe and describe how seeds and bulbs grow into mature plants</p> <p>-Describe how plants need water, light and a suitable temperature to grow and stay healthy, and describe the impact of changing these</p>	<p>-Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>-Explore and describe 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 in which water is transported within plants</p> <p>-Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p>			
Seasonal Changes Understanding the World	<p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter</p>	<p>Observe changes across the four seasons</p> <p>- Observe and describe weather associated with the seasons and how day length varies</p>					
Earth and Space						<p>-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>	

						<ul style="list-style-type: none"> - Describe the Sun, Earth and Moon as approximately spherical bodies - Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky 	
<p>Forces and Magnets</p> <p>EYFS – understanding the World</p>	<ul style="list-style-type: none"> -Explore and talk about different forces they can feel. 			<ul style="list-style-type: none"> - Compare how things move on different surfaces - Notice that some forces need contact between two objects, but magnetic forces can act at a distance - Observe how magnets attract or repel each other and attract some materials and not others - Observe how magnets attract or repel each other and attract some materials and not others - Describe magnets as having two poles - Predict whether two magnets will attract or repel each other, depending on which poles are facing 		<ul style="list-style-type: none"> - Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object - Identify the effects of air resistance, water resistance and friction, that act between moving surfaces - Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect 	
Electricity					<ul style="list-style-type: none"> -Identify common appliances that run on electricity - Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers - Identify whether or not a lamp will light in a simple series circuit, 		<ul style="list-style-type: none"> - Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit - Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and

					<p>based on whether or not the lamp is part of a complete loop with a battery</p> <ul style="list-style-type: none"> - Recognise that a switch opens and 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 		<p>the on/off position of switches</p> <ul style="list-style-type: none"> - Use recognised symbols when representing a simple circuit in a diagram
States of Matter	<p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter</p>				<ul style="list-style-type: none"> - Compare and group materials together, according to whether they are solids, liquids or gases - 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) - Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature 		
Materials EYFS Understanding the World	<ul style="list-style-type: none"> - Talk about the differences between materials and changes they notice - Use all of their senses and hands on exploration of natural materials Explore collections of materials with similar 	<ul style="list-style-type: none"> - 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 rock - Describe the simple physical properties of a variety of everyday materials 	<ul style="list-style-type: none"> - Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses - Describe how the shapes of solid objects made from some materials can be changed 			<ul style="list-style-type: none"> - 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 - Recognise that some materials will dissolve 	

	and /or different properties	- Compare and group together a variety of everyday materials on the basis of their simple physical properties	by squashing, bending, twisting and stretching			<p>in liquid to form a solution, and describe how to recover a substance from a solution</p> <ul style="list-style-type: none"> - Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating - Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic - Demonstrate that dissolving, mixing and changes of state are reversible changes - 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 	
Rocks	<p>-Use all of their senses and hands on exploration of natural materials</p> <p>Explore collections of materials with similar and /or different properties</p>			<ul style="list-style-type: none"> - Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties - Describe in simple terms how fossils are formed when things that have lived are trapped within rock 			

				- Recognise that soils are made from rocks and organic matter			
Sound	Explore the natural world around them Describe what they see hear and feel while outside				- Identify how sounds are made, associating some of them with something vibrating - Recognise that vibrations from sounds travel through a medium to the ear - Find patterns between the pitch of a sound and features of the object that produced it - Find patterns between the volume of a sound and the strength of the vibrations that produced it - Recognise that sounds get fainter as the distance from the sound source increases		
Light	Explore the natural world around them Describe what they see hear and feel while outside			-Recognise that he/she needs light in order to see things and that dark is the absence of light - Notice that light is reflected from surfaces - Recognise that light from the sun can be dangerous and that there are ways to protect eyes - Recognise that shadows are formed when the light from a light source is blocked by a solid object - Find patterns in the way that the size of shadows change			- Recognise that light appears to travel in straight lines - 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 - 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 - Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them

<p>Planning and Asking Questions</p> <p>(EYFS Communication and Language/Listening Attention and Understanding) EYFS – The World</p>	<p>Understand ‘why’ questions, like ‘why do you think the caterpillar got so fat?’</p> <ul style="list-style-type: none"> -Learn new vocabulary - Ask questions to find out more and to check what has been said to them - Articulate their ideas and thoughts in well-formed sentences - Describe events in some detail - Use talk to work out problems and organise thinking and activities and to explain how things work and why they might happen. - Use new vocabulary in different contexts. - Make comments about what they have heard and ask questions to clarify their understanding. 	<p>-Ask simple questions and recognise that they can be answered in different ways</p>	<p>-Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum</p>	<p>-Ask relevant questions and use different types of scientific enquiries to answer them</p>	<p>-Ask relevant questions and use different types of scientific enquiries to answer them</p>	<p>-Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p>	<p>-Plan different types of scientific enquiries to answer their own or others' questions, including recognising and controlling variables where necessary</p>
<p>Setting up enquiries</p>	<p>Explore the natural world around them</p>	<p>-Perform simple tests</p>	<p>-Perform simple comparative tests</p>	<p>-Set up simple practical enquiries, comparative and fair tests</p>	<p>-Set up simple practical enquiries, comparative and fair tests</p>	<p>-Use test results to make predictions to set up further comparative and fair tests</p>	<p>-Use test results to make predictions to set up further comparative and fair tests</p>
<p>Observing and Measuring</p> <p>EYFS The World</p>	<ul style="list-style-type: none"> -Develop an understanding of growth, decay and changes over time. -Look closely at similarities, differences, patterns and change. 	<p>-Use simple equipment to observe closely</p>	<p>-Use simple equipment to observe closely including changes over time</p>	<p>-Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p>	<p>-Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p>	<p>-Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p>	<p>-Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p>

Recording	Explore the natural world round them, making observations and drawing pictures of animals and plants	-Gather and record data to help in answering questions	-Gather and record data to help in answering questions including from secondary sources of information	-Gather, record, classify and present data in a variety of ways to help in answering questions -Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	-Gather, record, classify and present data in a variety of ways to help in answering questions -Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	-Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	-Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
Interpret and Report EYFS Understanding the World	-Use all of their senses in hands-on exploration of natural materials. -Explore collections of materials with similar/different properties. -Talk about what they see using a wide vocabulary. -Begin to make sense of their own life-story and family's history. -Explore how things work. -Begin to understand the need to respect and care for the natural environment and all living things.	-Identify and classify	-Identify, group and classify Communicate his/her ideas, what he/she does and what he/she finds out in a variety of ways	-Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Identify differences, similarities or changes related to simple scientific ideas and processes	-Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Identify differences, similarities or changes related to simple scientific ideas and processes	-Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations	-Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations -Group and classify things and recognise patterns -Find things out using a wide range of secondary sources of information
Evaluate	Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen	-Use his/her observations and ideas to suggest answers to questions	-Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns	-Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions -Use straightforward scientific evidence to answer questions or to support his/her findings	-Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions -Use straightforward scientific evidence to answer questions or to support his/her findings	-Identify scientific evidence that has been used to support or refute ideas or arguments	-Identify scientific evidence that has been used to support or refute ideas or arguments -Describe and evaluate their own and other people's scientific ideas related to topics in the national curriculum (including ideas that have changed over time), using evidence from a range of sources -Use appropriate scientific language and ideas from the national

							curriculum to explain, evaluate and communicate his/her methods and findings
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