

Being a Scientist at Tanners Brook Primary School – Progression of Knowledge (Substantive)

Tanners Brook definition of science



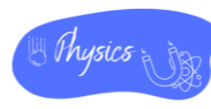
Being curious and asking questions about the world and beyond.

Science can help us understand how things work and why they happen the way they do.

EYFS Understanding the World														
	Biology				Chemistry				Physics					
	Plants	Animals, including humans	Living things & habitats	Evolution & inheritance	Rocks	Everyday materials	Properties & changes of materials	States of matter	Light	Sound	Forces & magnets	Seasonal changes	Earth & space	Electricity
Yr 1	X	X				X						X		
Yr 2	X	X	X			X								
Yr 3	X	X			X				X		X			
Yr 4		X	X				X			X				X
Yr 5		X	X				X				X		X	
Yr 6		X	X	X					X					X



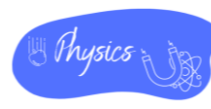
		<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Materials (inc. States of Matter)	<p>EYFS Area of learning - Understanding the World</p> <p>Yr 1 – Yr 6 National Curriculum</p>	<p><u>The Natural World</u></p> <ul style="list-style-type: none"> Understand some important processes and changes in the natural world around them, including changing states of matter. <p><u>Speaking</u></p> <ul style="list-style-type: none"> Offer explanations for why things happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems where appropriate. 	<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. Compare and group together a variety of everyday materials on the basis of their simple physical properties. 	<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. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 	<ul style="list-style-type: none"> (FORCES) 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. 	<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. 	<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. Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. 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. 	
	<p>What does this look like?</p>	<ul style="list-style-type: none"> Can use all senses in hands-on exploration of natural materials. Can talk about what they see using a range of taught vocabulary. Can explore simple similarities and differences between two materials and how materials change in terms of shape, size and texture. Can observe melting and freezing. 	<ul style="list-style-type: none"> Can label a picture/diagram of an object made from different materials. Can describe the properties of materials (hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through). Can sort and group materials using their properties. 	<ul style="list-style-type: none"> Can name an object, say what material it is made from, identify properties and make a link between property and use. Can use suitable vocabulary to compare materials, describing similarities and differences. Can describe how some objects can change shape. 	<ul style="list-style-type: none"> Can name and demonstrate a range of magnetic materials. Can explain that all magnetic materials are made of metal but not metal is magnetic. 	<ul style="list-style-type: none"> Can name properties of solids, liquids and gases. Can give everyday examples of melting and freezing. Can give everyday examples of evaporation and condensation. Can describe the water cycle. Can measure temperature using a thermometer. 	<ul style="list-style-type: none"> Can explain everyday uses of material e.g. how bricks, wood, glass is used in buildings. Can explain what dissolving is, giving examples. Can name equipment used for filtering and sieving. Can use knowledge of liquids, gases and solids to suggest how materials can be recovered from solutions or mixtures by evaporation, filtering or sieving. Can describe simple reversible and non-reversible changes to materials, giving examples. Can compare and group everyday materials, using relevant scientific vocabulary to explain. 	



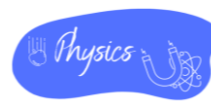
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Rocks and Fossils	<u>EYFS Area of learning - Understanding the World</u> <u>Yr 1 – Yr 6 National Curriculum</u>				<ul style="list-style-type: none"> Compare and group together different kinds of rocks on the basis of their appearance and simple physical 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. 			<ul style="list-style-type: none"> (EVOLUTION) Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.
	<u>What does this look like?</u>				<ul style="list-style-type: none"> Can name some types of rock and give physical features of each. Can explain how a fossil is formed. Can explain that soils are made from rocks and also contain living/dead matter. Can classify rocks in a range of ways using scientific vocabulary. Can explore and test properties of rocks. Can use research to find out about Mary Anning and her work. 			<ul style="list-style-type: none"> Can give examples of things that lived millions of years ago and use fossil evidence to support this.



		<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Seasonal Changes	EYFS Area of learning - Understanding the World	<u>The Natural World</u> <ul style="list-style-type: none"> Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. 	<ul style="list-style-type: none"> Observe changes across the 4 seasons. Observe and describe weather associated with the seasons and how day length varies. 		<ul style="list-style-type: none"> (LIGHT) Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. 		<ul style="list-style-type: none"> (EARTH AND SPACE) Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. 	
	Yr 1 – Yr 6 National Curriculum							
	What does this look like?	<ul style="list-style-type: none"> Can describe the weather outside and suggest what they might wear and what they might see. Can comment on the environment (e.g. the leaves have fallen off the tree, there is a puddle, etc.). Can begin to understand the effect of changing seasons on the natural world around them (e.g. plants growing, insects, etc.) 	<ul style="list-style-type: none"> Can name four seasons and identify when in the year they occur. Can observe and describe weather in different seasons. Can describe days being longer in summer and shorter in winter. Can present data in tables, charts and compare seasons. Can explain how to keep safe in the sun. Understand that it isn't always snowing in winter, warm in summer, etc. 		<ul style="list-style-type: none"> Understand the multiple ways they can keep themselves safe in the sun. Can explain that the sun can damage eyes due to the brightness. 		<ul style="list-style-type: none"> Begin to understand that we have seasons due to the rotation and revolution of the Earth on its axis. 	



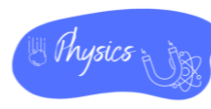
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Earth and Space	EYFS Area of learning - Understanding the World Yr 1 – Yr 6 National Curriculum						<ul style="list-style-type: none"> Describe the movement of the Earth and other planets relative to the sun in the solar system. Describe the movement of the moon relative to the Earth. 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. 	
	What does this look like? <ul style="list-style-type: none"> Can observe that we have day and night, explaining some basic differences between the two. Can explain some of the objects that they can see in the sky. 						<ul style="list-style-type: none"> Can show, using diagrams and/or models, the movement of the Earth and moon. Can explain the rotation of the Earth and how this causes night and day. Can explain evidence gathered about the position of shadows in terms of movement of the Earth. Can name a range of objects found within our solar system. Can explain the size and scale of planets in the solar system. Can explain why we can see different phases of the moon. 	



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Forces	<p>EYFS Area of learning - Understanding the World</p> <p>Yr 1 – Yr 6 National Curriculum</p>	<p><u>The Natural World</u></p> <ul style="list-style-type: none"> Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. 		<ul style="list-style-type: none"> (MATERIALS) Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 	<ul style="list-style-type: none"> Compare how things move on different surfaces. Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. 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. Describe magnets as having 2 poles. Predict whether 2 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. 	
	<p>What does this look like?</p>	<ul style="list-style-type: none"> Can play with a range of toys of varying sizes made of different materials and fit them together in different ways such as twisting, pushing, slotting or magnetism. Can manipulate playdough in different ways. Can explore whether items sink or float. Can explore magnets and recognise that some materials are magnetic and some are not. 		<ul style="list-style-type: none"> Can explain that materials need a force to act upon them in order to change (e.g. I need to push the playdough in order for it to squash.). 	<ul style="list-style-type: none"> Can give examples of forces in everyday life. Can give examples, using results, of how objects move differently on different surfaces. Can demonstrate how the poles attract and repel. Can draw diagrams using arrows to show the attraction and repulsion between the poles of magnets. Can use some classification to know some metals are not magnetic. Can demonstrate that magnetic force acts over distance. 		<ul style="list-style-type: none"> Can demonstrate the effect of gravity acting on an unsupported object. Can explain that the weight of an object does not affect the speed it falls. Can explain that gravity is different on different planets due to mass. Can explain how friction is created and that it slows items down. Can give examples of when it is beneficial to have high or low friction, water resistance and air resistance. Can demonstrate how pulleys, levers and gears work. Can explain when levers, pulleys and gears are used in everyday life. Can accurately measure force using a Newton meter. 	



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Light	<p>EYFS Area of learning - Understanding the World</p> <p>Yr 1 – Yr 6 National Curriculum</p>		<ul style="list-style-type: none"> (MATERIALS) Describe the simple physical properties of a variety of everyday materials. 	<ul style="list-style-type: none"> (MATERIALS) Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. 	<ul style="list-style-type: none"> Recognise that they need 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 their eyes. Recognise that shadows are formed when the light from a light source is blocked by an opaque object. Find patterns in the way that the size of shadows change. 		<ul style="list-style-type: none"> (EARTH AND SPACE) Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. (MATERIALS) 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. 	<ul style="list-style-type: none"> 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.
	What does this look like?	<ul style="list-style-type: none"> Can explain that the sun produces light. Can explain that electronic devices can produce light. 	<ul style="list-style-type: none"> Can use taught vocabulary to describe whether light can travel through materials (opaque/transparent). 	<ul style="list-style-type: none"> Can use their knowledge of light travelling through objects to explain which materials should be used for windows, walls, etc. 	<ul style="list-style-type: none"> Can explain that without light, we cannot see things (when it is dark). Can group items based on whether they're transparent, translucent or opaque. Understand the multiple ways they can keep themselves safe in the sun. Can explain that the sun can damage eyes due to the brightness. Can observe how shadows are formed in relation to the position of the light source. Can spot patterns in how shadows change size in relation to the position of the light source. 		<ul style="list-style-type: none"> Can observe, record and explain how shadows change throughout the course of the day. Can compare and rank materials based on their transparency, translucency and opaqueness. 	<ul style="list-style-type: none"> Can describe with diagrams how light travels in straight lines, either from sources or reflected from other objects into our eyes. Can describe with diagrams how light travels in straight lines past translucent or opaque objects to form a shadow of the same shape. Can describe why shadows change size when the light source moves.



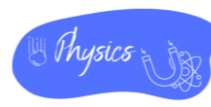
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Sound	<p><u>EYFS Area of learning - Understanding the World</u></p> <p><u>Yr 1 – Yr 6 National Curriculum</u></p>	<p><u>Listening, Attention and Understanding</u></p> <ul style="list-style-type: none"> Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions <p><u>Being Imaginative and Expressive</u></p> <ul style="list-style-type: none"> Perform songs, rhymes, poems and stories with others, and – when appropriate – try to move in time with music 				<ul style="list-style-type: none"> 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. 		
	<p><u>What does this look like?</u></p>	<ul style="list-style-type: none"> Can listen to a range of music and sound, commenting on whether they like it or not. Can understand that we can hear because of our ears. Can understand that sound is sometimes quiet, loud, high, low, etc. 				<ul style="list-style-type: none"> Can describe a range of sounds and explain how sound is made. Can explain what happens to sound over distance. Can observe how sound travels through vibrations. Can explain that sound travels from a source to our ears. Can explain that objects create different sounds. Can explore a range of instruments to observe a variety of pitch and volume. 		



		<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Electricity	<p>EYFS Area of learning - Understanding the World</p> <p>Yr 1 – Yr 6 National Curriculum</p>					<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, based on whether or not the lamp is part of a complete loop with a battery. 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. 	<ul style="list-style-type: none"> (MATERIALS) 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. 	<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 the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.
	<p>What does this look like?</p>	<ul style="list-style-type: none"> Can explore toys that use electricity, understanding that they need to be turned on and off. Can explore how electrical items have different uses (e.g. light, sound, movement, etc.). 				<ul style="list-style-type: none"> Can group appliances that use electricity (practically), explaining how electricity is useful to us. Can name the components in a circuit. Can construct an electrical circuit. Can control a circuit using a switch. Can name some metals that are conductors. Can name materials that are insulators. Can spot patterns relating to the number of bulbs, batteries, etc. Can draw labelled diagrams (NOT using symbols) to explain how a circuit works. 	<ul style="list-style-type: none"> Can identify materials that are electrical conductors, explaining their uses in everyday life. Can identify materials that are electrical insulators, explaining their uses 	<ul style="list-style-type: none"> Can explain that the higher the voltage, the brighter the bulb/louder the buzzer, etc. Can draw diagrams of circuits, using recognised symbols. Can explain how a circuit operates to achieve particular operations, such as control the light for a torch with different brightness or make a motor go faster or slower. Can understand how and make circuits to solve particular problems (e.g. an alarm, fairy light, etc.). Can carry out fair tests, exploring changes in circuits. Can explain that a switch needs to be closed in order for circuits to work due to electrical flow.



		EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants	<p>EYFS Area of learning - Understanding the World</p> <p>Yr 1 – Yr 6 National Curriculum</p>	<p><u>The Natural World</u></p> <ul style="list-style-type: none"> Explore the natural world around them, making observations and drawing pictures of animals and plants. 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. Understand some important processes and changes in the natural world around them. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 	<ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. 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. Investigate the way in which water is transported within plants. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. 	<ul style="list-style-type: none"> (LIVING THINGS AND THEIR HABITATS) Recognise that living things can be grouped in a variety of ways. (LIVING THINGS AND THEIR HABITATS) Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. (LIVING THINGS AND THEIR HABITATS) Recognise that environments can change and that this can sometimes pose dangers to living things. 	<ul style="list-style-type: none"> (LIVING THINGS AND THEIR HABITATS) Describe the life process of reproduction in some plants and animal. 	<ul style="list-style-type: none"> (LIVING THINGS AND THEIR HABITATS) 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. (LIVING THINGS AND THEIR HABITATS) Give reasons for classifying plants and animals based on specific characteristics.
	<p>What does this look like?</p>	<ul style="list-style-type: none"> Can plant seeds and care for growing plants. Can understand the basic features of a simple plant life cycle. Can name basic parts of a plant e.g. leaf, petal. Can group plants into broad groups (e.g. trees, flowers, vegetables, etc.). Can explore the local area, identifying and naming some plants in it. 	<ul style="list-style-type: none"> Can name trees and other plants they see regularly (e.g. daffodil, dandelion, oak tree, etc). Can describe key features of the trees and plants (e.g. shapes of leaves/colour of the flower/blossom). Can point out trees which have lost their leaves and those who keep them all year. Can point to and name parts of a plant. Can draw and label a simple diagram of a plant. Can use simple charts to sort plants. Can use photos to talk about how plants change. 	<ul style="list-style-type: none"> Can describe how plants that have grown from seeds and bulbs have developed over time. Can identify plants that grew well in different conditions. Can spot similarities and differences between bulbs and seeds. Can nurture seeds and bulbs into mature plants, identifying and explaining the different requirements of different plants. Can observe the changes of a growing plant over time. 	<ul style="list-style-type: none"> Can explain the function of the parts of a flowering plant. Can describe the life cycle of flowering plants, including pollination, seed formation, seed dispersal and germination. Can give different methods of pollination and seed dispersal, including examples. Can look at features of seeds to decide on method of dispersal. Can draw and label a diagram of their created flowering plant to show its parts and their role and method of pollination and seed dispersal. Can observe and explain how water is transported within plants. 	<ul style="list-style-type: none"> Can group plants found in the local area based on their properties (e.g. flowering and non-flowering). Can explain that environments change over the course of the year (e.g. deciduous trees) and why these changes can support life. 	<ul style="list-style-type: none"> Can dissect and label parts of a flowering plant, including male and female parts. Can record findings as an annotated illustration of a flowering plant. Can explain the life cycle and reproduction of a plant (both sexual and asexual), using scientific language. 	<ul style="list-style-type: none"> Can give examples of flowering and non-flowering plants. Can use classification keys to identify unknown plants. Can create classification keys for plants in the local area.



		EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Living Things and Their Habitats	EYFS Area of learning - Understanding the World	<p><u>The Natural World</u></p> <ul style="list-style-type: none"> Explore the natural world around them, making observations and drawing pictures of animals and plants. 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><u>People, Culture and Communities</u></p> <ul style="list-style-type: none"> Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps. 	<ul style="list-style-type: none"> (PLANTS) Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (ANIMALS INC HUMANS) Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. 	<ul style="list-style-type: none"> Explore and compare the differences between things that are living, dead, and things that have never been alive. 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. Identify and name a variety of plants and animals in their habitats, including microhabitats. 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. 	<ul style="list-style-type: none"> (PLANTS) 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. 	<ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Recognise that environments can change and that this can sometimes pose dangers to living things. 	<ul style="list-style-type: none"> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals. 	<ul style="list-style-type: none"> 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. Give reasons for classifying plants and animals based on specific characteristics.
	Yr 1 – Yr 6 National Curriculum	<p>What does this look like?</p> <ul style="list-style-type: none"> Can explore the natural world around them and make observations about what is in it (e.g. minibeasts, birds, etc.). Can recognise some animal habitats. Can understand how to look after animals and the environment, including habitats. Can explore where they live and begin compare to other places in the world (e.g. weather, animals there, etc.). 	<ul style="list-style-type: none"> Can understand that animals have different habitats in order to meet their needs. Can explore the local area in order to observe local habitats and living things in them. Can explain why animals need to be returned safely to their habitat if moved for observation. Can explain that a plant is alive and needs to several things in order to survive. 	<ul style="list-style-type: none"> Can identify a range of items which are dead, living and have never been alive. Can name plants/animals which live in different habitats, explaining why, including microhabitats (e.g. woodlice). Can talk about the features of the animal/plant and how they are suited to their habitat. Can talk about what different animals eat. Can construct a simple food chain. Can explain some of the life processes of animals. 	<ul style="list-style-type: none"> Can identify that plants grow in a variety of environments in order to get the requirements they need. 	<ul style="list-style-type: none"> Can name living things in a range of habitats, giving key features that helped identify them. Can give examples of how an environment may change both naturally and due to human impact. Can use classification keys to identify plants and animals. Can put vertebrate animals into groups (e.g. fish, amphibians, reptiles, birds, and mammals). Can put invertebrates into groups (e.g. snails and slugs, worms, spiders, and insects). Can group animals based on their feeding pattern (e.g. consumer, prey, predator, etc.). 	<ul style="list-style-type: none"> Can describe the lifecycles of mammals, amphibians, birds and insects using labelled diagrams. Can describe similarities and differences between them (e.g. eggs/live young, metamorphosis, etc.). Can dissect and label parts of flowering plant including male and female parts. Can record findings as an annotated illustration of a flowering plant. Can explain the life cycle and reproduction of a plant (both sexual and asexual), using scientific language. 	<ul style="list-style-type: none"> Can give examples of animals in the five vertebrate groups and some of the invertebrate groups. Can give key characteristics of the five vertebrate groups and some invertebrate groups. Can use classification keys to identify unknown plants and animals. Can create classification keys for plants, microorganisms and animals based on observable features. Can give a number of characteristics that explain why an animal belongs to a particular group.



		<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Animals, including Humans (Animals)	EYFS Area of learning - Understanding the World	<p><u>The Natural World</u></p> <ul style="list-style-type: none"> Explore the natural world around them, making observations and drawing pictures of animals and plants. 	<ul style="list-style-type: none"> 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 mammals including pets). 	<ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). 	<ul style="list-style-type: none"> 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. Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	<ul style="list-style-type: none"> Construct and interpret a variety of food chains, identifying producers, predators and prey. 		<ul style="list-style-type: none"> Describe the ways in which nutrients and water are transported within animals, including humans.
	Yr 1 – Yr 6 National Curriculum							
	What does this look like?	<ul style="list-style-type: none"> Can talk about simple similarities and differences between living things. Can make simple observations about animals. Can explore basic lifecycles of animals. Can group animals based on characteristics (e.g. fur, four legs, wings, etc.). Can explain that some animals are pets and that they need looking after. Can observe how different animals move. Can draw pictures of animals, explaining what they have drawn and why. 	<ul style="list-style-type: none"> Can name a range of animals which includes animals from each of the vertebrate groups. Can describe the key features of named animals. Can label key features on a picture/diagram. Can write descriptively about an animal, using taught vocabulary. Can describe what a range of animals eat. Can compare and classify animals through features. Can identify animals that are common pets and explain how to look after them. 	<ul style="list-style-type: none"> Can describe how animals change as they get older (basic life cycles). Begin to understand how insects change (more than a butterfly) through lifecycle diagrams. Can explain animals need to survive. Can explain why animals have offspring. 	<ul style="list-style-type: none"> Can explain that different animals need to eat different things. Can compare skeletal systems of different animals. Can compare muscular systems of different animals. 	<ul style="list-style-type: none"> Can identify whether an animal is an omnivore, carnivore or herbivore based on its teeth. Can read food chains, explaining what they show. Can create food chains for animals in the local area. 		<ul style="list-style-type: none"> Can describe the ways that nutrients, water and oxygen is transported in different animals.



		<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Animals, including Humans (Humans)	EYFS Area of learning - Understanding the World	<p><u>Managing Self</u></p> <ul style="list-style-type: none"> Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. 	<ul style="list-style-type: none"> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 	<ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 	<ul style="list-style-type: none"> 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. Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	<ul style="list-style-type: none"> Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions. 	<ul style="list-style-type: none"> Describe the changes as humans develop to old age. 	<ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans.
	Yr 1 – Yr 6 National Curriculum							
	What does this look like?	<ul style="list-style-type: none"> Can describe themselves, using some of the body parts. Can explain that they need to eat certain food in order to keep healthy. Can name a range of healthy foods. Can explain that they need to be clean to stay healthy. 	<ul style="list-style-type: none"> Can name the parts of the human body they can see. Can identify the body parts that are linked to each sense. Can understand that not all people have the same features (e.g. hair colour, eye colour, shoe size, etc.). Can explore the use of each of the five senses. 	<ul style="list-style-type: none"> Can describe how to keep clean and healthy. Can understand the food plate and understand what is meant by 'a healthy balanced diet'. Can understand the effect of exercise on the body. Can understand the basic needs of a human. Can explain that babies develop in stages. 	<ul style="list-style-type: none"> Can name some nutrients found in food. Can state that to be healthy, we need to eat the right types of food to give us the correct amount of these nutrients. Can name some bones that make up the skeleton giving examples that support, help them move or provide protection. Can describe how muscles and joints help them to move. Can classify food groups (high/low nutrients) and use data to look for patterns in food. Can give similarities and differences between skeletons. 	<ul style="list-style-type: none"> Can sequence the main parts of the digestive system. Can draw the main parts of the digestive system onto a human outline. Can describe what happens in each part of the digestive system. Can point to three different types of teeth in their mouth and talk about what each is used for. Can explain how to keep our teeth healthy and strong. Can demonstrate the journey of food through body. 	<ul style="list-style-type: none"> Can explain the six stages of the human life cycle. Can understand that the foetal stage is vital for growth and development. Can explain what happens to both the male and female body during puberty. Can explain how humans change throughout their life. 	<ul style="list-style-type: none"> Can identify and locate the organs of the circulatory system. Can explain the functions of the circulatory system. Can create a labelled diagram of the human circulatory system. Can explain the positive and negative impacts of diet, exercise, drugs and lifestyle can have on the body. Can explain how to keep themselves healthy.



		<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Evolution and Inheritance	<u>EYFS Area of learning - Understanding the World</u> <u>Yr 1 – Yr 6 National Curriculum</u>	<u>Past and Present</u> <ul style="list-style-type: none"> Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class. Understand the past through settings, characters and events encountered in books read in class and storytelling. 			<ul style="list-style-type: none"> (ROCKS) Describe in simple terms how fossils are formed when things that have lived are trapped within rock. 			<ul style="list-style-type: none"> Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
	<u>What does this look like?</u>	<ul style="list-style-type: none"> Can understand that dinosaurs (that they may have read about in books) were once alive, but are now not. 			<ul style="list-style-type: none"> Can explain how a fossil is formed. Can understand that fossils are key to learning about creatures that no longer exist. 			<ul style="list-style-type: none"> Can explain the process of evolution. Can give examples of how plants and animals are suited to their environment (e.g. cacti, polar bears, etc.). Can give examples of how an animal or plant has evolved over time (e.g. peppered moth). Can give examples of things that lived millions of years ago and the fossil evidence to support this. Can explain why offspring are not identical to their parents. Can briefly explain the work of Charles Darwin and his importance in our understanding today.