



# Sherdley Primary School

## Science Curriculum Map 2020-21

	Autumn		Spring		Summer	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Pre-school	<p><b>Children will Investigate wool and it's uses</b> See Early Years map for full details</p>	<p><b>Children will learn colour mixing and investigations.</b> See Early Years map for full details</p>	<p><b>Children will looking at our solar system and find out about planets. They will now that we live on planet Earth</b> See Early Years map for full details</p>	<p><b>Children will look at 'New life' and consider what a baby is and its needs. Children will experience a Spring Walk and will be able to talk about seasonal changes.</b> See Early Years map for full details</p>	<p><b>Children will look at Plants and how they grow:</b> See Early Years map for full details</p>	<p><b>Children will learn about their senses and will carry out simple Investigations around their different senses:</b> See Early Years map for full details</p>
Reception	<p><b>Investigating Materials:</b> See Early Years map for full details</p>	<p><b>Objects and their Features:</b> See Early Years map for full details</p>	<p><b>Patterns and changes in food:</b> See Early Years map for full details</p>	<p><b>Investigating Materials:</b> See Early Years map for full details</p>	<p><b>Changes and patterns in life cycles:</b> See Early Years map for full details</p>	<p><b>Environments and Habitats.</b> See Early Years map for full details</p>
Year 1	<p><b>Animals including humans</b> Children will learn about the parts of the human body and say which part is associated with each sense; I can name and label the basic parts of the human body. Children will learn how to name and identify common animals and identify carnivores, herbivores and omnivores. Children will also describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets). Children will also be given the opportunity to explore animals their local environment and become familiar with common animals. Children will be given the opportunity to explore the animals in their natural environment and work scientifically to observe, compare and contrast them.</p>		<p><b>Everyday materials: Properties and grouping and sorting</b> Children will learn to distinguish between an object and the material from which it is made and be able to identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. Children will explore and describe the simple physical properties of a variety of everyday materials and compare and group together a variety of everyday materials on the basis of their simple physical properties. Children will explore a variety of subject specific language to describe the materials and their properties. Children will be given the opportunity to explore a wide variety of materials during investigations e.g. which material is best for an umbrella?</p>		<p><b>Plants</b> Children will learn how to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Children will also identify and describe the basic structure of a variety of common flowering plants, including trees. Children will have the opportunity to use their local environment to explore the plants growing in their habitat and to plant and observe the growth of plants and flowers which they have planted.</p>	

Working scientifically	<p><b>Seasonal changes</b>  <b>This will be completed throughout the year.</b>  Children will be taught to observe the changes across the 4 seasons, with a particular focus on Autumn and Winter, and observe and describe the weather associated with the seasons and how day length varies.  Children will be able to identify and name the four seasons and describe the related weather.</p>	<p><b>Seasonal changes</b>  <b>This will be completed throughout the year.</b>  To continue on from prior learning in Autumn term, in this unit, children will be taught to observe the changes across Spring and look at what weather we associate with Spring. Children will be given the opportunity to compare and contrast this with Autumn. Generating questions that can be answered in different ways. Observational investigation of recording data in tables length of days etc</p>		<p><b>Seasonal changes</b>  <b>This will be completed throughout the year.</b>  To continue on from prior learning from the Spring term, in this unit, children will be taught to observe the changes during the summer season and look at what weather we associate with Summer. Children will be given the opportunity to compare and contrast this with Spring and describe the feature that change throughout the year – food grown, plants animals</p>
	<p>Generating questions that can be answered in different ways, i.e. from observations.  Observational investigation using simple equipment, i.e. magnifying glasses. I can use my observations to ask simple questions  Identifying and classifying animals into groups, gather information and record data to help answer questions.  Recording data about the weather throughout the year and present in tables or charts.</p>	<p>Identifying and classifying materials., i.e. made of metal  Observing practical uses of everyday materials – test properties of objects for absorbency, strength, stiffness, waterproofness.  Compare and group materials using sorting circles, i.e. what are spoons made of  Gather and present data about the length of the day</p>		<p>Identifying and classifying plants  Simple investigations to identify structures of plants  Present information in different ways – collect information about different seasonal features.</p>
Year 2	<p><b>Living Things and Habitats</b>  Children will learn how to explore and compare the differences between things that are living, dead, and things that have never been alive. Children will also 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. Children will also explore and name a variety of plants and animals in their habitats, including microhabitats. Children will 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. The purpose of this unit is to understand the concept of a living thing and how their basic needs are met in order for them to survive. Children will also have the opportunity to understand and explore natural habitats and understand how living things and plants depend on each other.</p>	<p><b>Materials</b>  Children will learn how to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Children will also be taught find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<p><b>Animals including humans</b>  Children will be taught how to notice that animals, including humans, have offspring which grow into adults. Children will have the opportunity to find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Children will describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Children will also explore what animals need to survive and the</p>	<p><b>Plants</b>  Children will learn how to observe and describe how seeds and bulbs grow into mature plants. Children will be taught how to find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Children will work scientifically to explore the local environment throughout the year to understand how plants grow and the requirements of what they need in order to grow and survive.</p>

Working scientifically				importance of exercise and nutrition for humans. Children will also be introduced to the process of growth and reproduction in animals, with a particular focus on how to recognise growth e.g. an egg to a caterpillar and/or a lamb to a sheep.	
	Children will work scientifically. Children will work scientifically to explore the uses of different materials e.g. the best material for a waterproof coat  Identifying and comparing the suitability of materials – <i>links to the mill industry</i> Perform simple tests, identify and classify Using observations to answer questions, making close observations and using simple equipment	Children will work scientifically to explore whether things are dead or alive and refer to their new and prior knowledge to support them to make their judgements. Ask simple questions and recognising that can be answered in different ways, gathering and recording data to help answer questions, identifying and classifying. Make close observations using simple equipment. Gather information about plants and animals to help answer simple questions.	Children can use diagrams to show life cycles. They can measure and observe how animals grow. Children can create and owners guide to looking after a pet. Classify and name food groups. Explore the effects of exercise on our bodies and record the results. Investigate the impact of washing hands properly. Investigate the effect of too much sugar on teeth.	Children will work scientifically to understand and observe how plants grow and how they change over time and conduct a comparative test to understand what plants need. They will gathering and recording data to answer questions, observe closely and use equipment, identifying and classifying plants, generating questions that can be answered in different ways.	
Year 3	<b>Forces and magnets</b> Children will learn to compare how things move on different surfaces. They will also explore and notice that some forces need contact between two objects, but magnetic forces can act at a distance. Children will be given the	<b>Rocks</b> Children will learn how to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. They will learn how to describe in simple terms how fossils are formed when things that have lived are trapped within rock. They	<b>Plants</b> Children will learn to explore the features and functions of plants. They will be given opportunities to identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. They will also explore the requirements of plants for life and growth (air, light, water, nutrients	<b>Light and Dark</b> Children will learn all about the importance of light and how the eye reacts to light to help us to see. Children will be taught to recognise that they need light in order to see things and that dark is the absence of light. They will also learn how light is reflected from surfaces.	<b>Animals including Humans</b> Children will be taught to 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. Children will learn and identify that humans and some other animals have skeletons and muscles for support, protection and movement.

Working scientifically	<p>opportunity to observe how magnets attract or repel each other and attract some materials and not others. During observations and investigations, children will be taught how to 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. They will also focus on how to describe magnets as having two poles and predict whether two magnets will attract or repel each other, depending on which poles are facing. Children will explore the behaviour of everyday uses of different magnets (for example, bar, ring, button and horseshoe).</p>	<p>will be able to recognise that soils are made from rocks and organic matter.</p>	<p>from soil, and room to grow) and how they vary from plant to plant. Children will also explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	<p>They will learn that light from the sun can be dangerous and that there are ways to protect their eyes. They will explore and recognise that shadows are formed when the light from a light source is blocked by an opaque object. Children will also find patterns in the way that the size of shadows change and work scientifically to explore this. They will discuss and explore this during investigations with mirrors.</p>	
	<p>Children will work scientifically to observe that magnetic forces can act without direct contact, unlike most forces, where direct contact is necessary (for example, opening a door, pushing a swing). Children will compare how different things</p>	<p>Classify rocks in a range of different ways and devise tests to explore the properties of rocks. Carry out research about how fossils are formed. Predict how permeable rocks are Carry out an investigation and report my findings on how soils are formed.</p>	<p>Children will be given opportunities to work scientifically to investigate the way in which water is transported within plants. They will ask relevant questions and use different types of scientific enquiries to answer them. They will set up a practical enquiries, record findings using drawings,</p>	<p>When working scientifically, children will look and measure shadows I order to find out how shadows are formed and find out what might cause shadows to change. They will making observations and taking accurate measurements.</p>	<p>When working scientifically, children will learn about the importance of nutrition. They will also compare different types of animals with and without skeletons and explore what would happen if humans did not have a skeleton. Children will use their researching skills to explore different food groups and what they provide for the body. They will also compare and contrast the diets of different animals and use this information to group them. They will report on findings, including oral and written explanations, displays or presentations, use</p>

	<p>move and grouping them; raising questions and carrying out tests to find out how far things move on different surfaces and gathering and recording data to find answers their questions; looking for patterns in the way that magnets behave in relation to each other and what might affect this, for example, which pole faces another. Setting up practical enquiries and comparative and fair tests, i.e. wheel size, surface texture Record findings using drawings, labelled diagrams, keys, bar charts and tables; draw simple conclusions and make predictions. Report findings in a variety of ways.</p>		labelled diagrams, keys, bar charts and tables.		results to draw conclusions and raise further questions, use scientific evidence to answer questions.
Year 4	<p><b>States of matter</b> Children will be taught how to compare and group materials together, according to whether they are solids, liquids or gases. Children will observe that some materials change state when they are heated or cooled,</p>	<p><b>Living things in the environment</b> Children will be taught how to recognise that living things can be grouped in a variety of ways. They will also explore and use classification keys to help group, identify and name a variety of living things in their local and</p>	<p><b>Animals and humans</b> Children will describe the simple functions of the basic parts of the digestive system in humans. They will also identify the different types of teeth in humans and their simple functions. They will construct and interpret a variety of food chains, identifying producers, predators and prey. Children will learn about the main body parts associated with the digestive system, for example, mouth, tongue, teeth, oesophagus, stomach and small and large intestine and explore questions that help them to understand their special functions.</p>	<p><b>Electricity</b> Children will learn about common appliances that run on electricity and construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. They will also identify whether or not a</p>	<p><b>Sound.</b> Children will identify how sounds are made, associating some of them with something vibrating. They will also recognise that vibrations from sounds travel through a medium to the ear. They will be given</p>

	<p>and measure or research the temperature at which this happens in degrees Celsius (°C). They will also be given opportunities to identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. When carrying out investigations, children will explore a variety of everyday materials and develop simple descriptions of the states of matter (solids hold their shape; liquids form a pool not a pile; gases escape from an unsealed container). When working scientifically, When investigating states of matter, children will observe water as a solid, a liquid and a gas and should note the changes to water when it is heated or cooled.</p>	<p>wider environment. They will recognise that environments can change and that this can sometimes pose dangers to living things. Children will also identify how the habitat changes throughout the year. Children will also be given the opportunity to explore possible ways of grouping a wide selection of living things that include animals and flowering plants and non-flowering plants. Children will learn to sort vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects. Children will explore examples of human impact (both positive and negative) on environments, for example, the positive effects of nature reserves, ecologically planned parks, or garden ponds, and the negative effects of population and development, litter or deforestation.</p>		<p>lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. Children will be taught the skills of how to recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. They will also be able to recognise some common conductors and insulators, and associate metals with being good conductors. Throughout investigations, children will construct simple series circuits, trying different components, for example, bulbs, buzzers and motors, and including switches, and use their circuits to create simple devices. Children will draw the circuit as a pictorial representation. Children will learn about the precautions for working safely with electricity.</p>	<p>opportunities to find patterns between the pitch of a sound and features of the object that produced it. They will find patterns between the volume of a sound and the strength of the vibrations that produced it. They will also be taught how to recognise that sounds get fainter as the distance from the sound source increases. They will also find patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses</p>
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Working scientifically	<p>When working scientifically, children will be given the opportunity to group and classify a variety of different materials; exploring the effect of temperature on substances such as chocolate, butter, cream (for example, to make food such as chocolate crispy cakes and ice-cream for a party). They will research the temperature at which materials change state, for example, when iron melts or when oxygen condenses into a liquid. They will also observe and record evaporation over a period of time, for example, a puddle in the playground or washing on a line, and investigate the effect of temperature on washing, drying or snowmen melting. Children will be able to report findings from enquiries using written or oral presentations.</p>	<p>When working scientifically, children should use the local environment throughout the year to raise and answer questions that help them to identify and study plants and animals in their habitat. Children will use and make simple guides or keys to explore and identify local plants and animals; making a guide to local living things; raising and answering questions based on their observations of animals and what they have found out about other animals that they have researched. Use fieldwork to explore the human impact on the local environment, and use secondary sources to find out about human impact (positive &amp; negative) on environments.</p>	<p>When working scientifically, children will compare the teeth of carnivores and herbivores, and suggest reasons for differences; finding out what damages teeth and how to look after them. They will draw and discuss their ideas about the digestive system and compare them with models or images.</p>	<p>Children will work scientifically by: observing patterns, for example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit. They will present data in a variety of ways to answer questions. Draw simple conclusions. Make measurements using data loggers.</p>	<p>When working scientifically, children will explore and identify the way sound is made through vibration in a range of different musical instruments from around the world; and find out how the pitch and volume of sounds can be changed in a variety of ways. Make measurements using data loggers. They will draw simple conclusions</p>
Year 5	<p><b>Forces, Magnets and Electricity</b> Children will be taught that unsupported objects fall towards the Earth because of the</p>	<p><b>Earth and Space</b> Children will learn and explore all about Earth and the Solar System. They will learn about the movement of the Earth,</p>	<p><b>Materials and States of Matter</b> Children will 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. They will develop the knowledge to know that some materials will dissolve in</p>	<p><b>Living things and their habitats</b> Children will be taught all about the life cycle of a mammal. They will describe the differences in</p>	<p><b>Animals including humans</b> Children will learn about the changes as humans develop to</p>

	<p>force of gravity acting between the Earth and the falling object. They will explore the effects of air resistance, water resistance and friction, that act between moving surfaces. They will learn that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. When investigating, children will explore falling objects and raise questions about the effects of air resistance. They will explore the effects of air resistance by observing how different objects such as parachutes and sycamore seeds fall. Children will have opportunities to experience forces that make things begin to move, get faster or slow down. Children will investigate the effects of friction on movement and find out how it slows or stops moving objects, for example, by observing the effects of a brake on a bicycle wheel. They will also explore the effects of levers,</p>	<p>and other planets, relative to the Sun in the solar system. They will learn how the movement of the Moon is relative to the Earth. They will understand the Sun, Earth and Moon as approximately spherical bodies and use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. Children will learn about the differences between day and night and how this occurs. Children will be taught that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006). Children will also learn about the moon and understand that the moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones). Children will learn about keeping themselves safe and explore the reasons why they shouldn't look directly at the sun.</p>	<p>liquid to form a solution and describe how to recover a substance from a solution. They will use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. They will explore how to give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. They will learn that dissolving, mixing and changes of state are reversible changes. Through investigating and experimenting, children will learn 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. Children will build a more systematic understanding of materials by exploring and comparing the properties of a broad range of materials, including relating these to what they learnt about magnetism in year 3 and about electricity in year 4. They should explore reversible changes, including, evaporating, filtering, sieving, melting and dissolving, recognising that melting and dissolving are different processes. Children will also explore that changes that are difficult to reverse, for example, burning, rusting and other reactions, for example, vinegar with bicarbonate of soda. They will explore how chemists create new materials, for example, Spencer Silver, who invented the glue for sticky notes or Ruth Benerito, who invented wrinkle-free cotton.</p>	<p>the life cycles of a mammal, an amphibian, an insect and a bird as well as describing the life process of reproduction in some plants and animals. When investigating plants and their habitats, children will raise questions about their local environment and will focus on this throughout different point of the year. They will observe life-cycle changes in a variety of living things, for example, plants in the vegetable garden or flower border, and animals in the local environment. Children will also find out about the work of naturalists and animal behaviourists, for example, David Attenborough and Jane Goodall. Children will find out about different types of reproduction, including sexual and asexual reproduction in plants, and sexual reproduction in animals.</p>	<p>old age. To show this, children will draw a timeline to indicate stages in the growth and development of humans and they will learn about the changes experienced in puberty.</p>
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Working scientifically	<p>pulleys and simple machines on movement. Children will find out how scientists, for example, Galileo Galilei and Isaac Newton helped to develop the theory of gravitation.</p>				
	<p>Children will work scientifically when investigating an egg drop, or falling paper cones, or cup-cake cases, and designing and making a variety of parachutes and carrying out fair tests to determine which designs are the most effective. They will set up investigations to explore resistance in water by making and testing boats of different shapes (controlling variables). They will report findings from enquiries in oral and written forms.</p>	<p>Children will work scientifically when comparing the time of day at different places on the Earth through internet links and direct communication; creating simple models of the solar system; constructing simple shadow clocks and sundials, calibrated to show midday and the start and end of the school day; finding out why some people think that structures such as Stonehenge might have been used as astronomical clocks.</p>	<p>When working scientifically, children will carry out tests to answer questions, for example, ‘Which materials would be the most effective for making a warm jacket, for wrapping ice cream to stop it melting, or for making blackout curtains?’ Children will compare materials in order to make a switch in a circuit and observe and compare the changes that take place, for example, when burning different materials or baking bread or cakes. Children will also research and discuss how chemical changes have an impact on our lives, for example, cooking, and discuss the creative use of new materials such as polymers, super-sticky and super-thin materials.</p>	<p>When working scientifically, children will observe and compare the life cycles of plants and animals in their local environment with other plants and animals around the world (in the rainforest, in the oceans, in desert areas and in prehistoric times), asking pertinent questions and suggesting reasons for similarities and differences. Children will set up activities to grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, bulbs. Children will observe changes in an animal over a period of time (for example, by hatching and rearing chicks), comparing how different animals reproduce and grow.</p>	<p>When working scientifically, children will research the gestation periods of other animals and comparing them with humans; by finding out and recording the length and mass of a baby as it grows.</p>
Year 6	<b>Living things and their habitats</b>	<b>Electricity</b> Children will associate the brightness of a lamp or	<b>Light</b> Children will be taught light appears to travel in straight	<b>Evolution and Inheritance</b> Children will be taught that living things have	<b>Animals including Humans including Sex Education</b> Children will explore how living things are classified into broad groups according to common observable

	<p>Children will explore 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 Children will be taught the knowledge in order for them to give reasons for classifying plants and animals based on specific characteristics. Children will build on their learning about grouping living things in year 4 by looking at the classification system in more detail. Children will be introduced to the idea that broad groupings, such as micro-organisms, plants and animals can be subdivided. Children will learn how to classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals). They will discuss reasons why living</p>	<p>the volume of a buzzer with the number and voltage of cells used in the circuit. They will 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. They will also use recognised symbols when representing a simple circuit in a diagram. When investigating, children will construct simple series circuits, to help them to answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors. They will learn how to represent a simple circuit in a diagram using recognised symbols. Children will also be taught to take the necessary precautions for working safely with electricity.</p>	<p>lines. They will 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. Children will 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. They will use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. When investigating, children will explore the way that light behaves, including light sources, reflection and shadows. They will talk about what happens and make predictions.</p>	<p>changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Children will learn that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Children will identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. Children will develop their knowledge further in this unit by finding out more about how living things on earth have changed over time. Children will be introduced to the idea that characteristics are passed from parents to their offspring, for instance by considering different breeds of dogs, and what happens when, for example, Labradors are crossed with poodles. Children will appreciate that variation in offspring over time can make animals more or less able to survive in particular environments, for example, by exploring how giraffes' necks got longer, or the</p>	<p>characteristics and based on similarities and differences, including microorganisms, plants and animals Children will be taught the knowledge in order for them to give reasons for classifying plants and animals based on specific characteristics. Children will build on their learning about grouping living things in year 4 by looking at the classification system in more detail. Children will be introduced to the idea that broad groupings, such as micro-organisms, plants and animals can be subdivided. Children will learn how to classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals). They will discuss reasons why living things are placed in one group and not another. Children will reflect upon and find out about the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification.</p> <p><b>For Sex Education – further details to follow – see RSE Policy details</b></p>
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Working Scientifically	things are placed in one group and not another.			development of insulating fur on the arctic fox. Children will find out about the work of palaeontologists such as Mary Anning and about how Charles Darwin and Alfred Wallace developed their ideas on evolution.	
	When working scientifically, children will use classifying systems and keys to identify some animals and plants in the immediate environment. Children will be given the opportunity to research unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the classification system. Use direct observations to classify animals into in-vertebrates and vertebrates. Use scientific language to discuss scientific ideas. Children will reflect upon and find out about the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification. Plan an enquiry to answer simple	When working scientifically, children will systematically identify the effect of changing one component at a time in a circuit; designing and making a set of traffic lights, a burglar alarm or some other useful circuit. Use test results to make predictions to set up further comparative and fair testing. Report and present findings from an enquiry.	When working scientifically children will decide where to place rear-view mirrors on cars; designing and making a periscope and using the idea that light appears to travel in straight lines to explain how it works. Children will investigate the relationship between light sources, objects and shadows by using shadow puppets. They will extend their experience of light by looking a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters.	Possible trip to World Museum (with workshop)	When working scientifically, children will use classifying systems and keys to identify some animals and plants in the immediate environment. Children will be given the opportunity to research unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the classification system

	questions, including recognising and controlling variables where necessary.				
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