



	Autumn		Spring		Summer	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Pre-school	Children will Investigate wool and it's uses See Early Years map for full details	Children will learn colour mixing and investigations. See Early Years map for full details	Children will looking at our solar system and find out about planets. They will now that we live on planet Earth See Early Years map for full details	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. See Early Years map for full details	Children will look at Plants and how they grow: See Early Years map for full details	Children will learn about their senses and will carry out simple Investigations around their different senses: See Early Years map for full details
Reception	Investigating Materials: See Early Years map for full details	Objects and their Features: See Early Years map for full details	Patterns and changes in food: See Early Years map for full details	Investigating Materials: See Early Years map for full details	Changes and patterns in life cycles: See Early Years map for full details	Environments and Habitats. See Early Years map for full details

Year 1	<p><b>Animals including humans</b></p> <p>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>Seasonal changes</b></p> <p><b>This will be completed throughout the year.</b></p> <p>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>Everyday materials: Properties and grouping and sorting</b></p> <p>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 Bigu’s rocket? Wilbur and Orville Wright aeroplane challenge</p> <p><b>Seasonal changes</b></p> <p><b>This will be completed throughout the year.</b></p> <p>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>Plants</b></p> <p>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> <p><b>Seasonal changes</b></p> <p><b>This will be completed throughout the year.</b></p> <p>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>
Working scientifically	<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</p> <p>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</p> <p>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</p> <p>Gather and present data about the length of the day</p>	<p>Identifying and classifying plants</p> <p>Simple investigations to identify structures of plants</p> <p>Present information in different ways – collect information about different seasonal features.</p>

Year 2	<p style="text-align: center;"><b>Materials</b></p> <p>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 style="text-align: center;"><b>Animals including humans</b></p> <p>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 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.</p>		<p style="text-align: center;"><b>Plants</b></p> <p>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>	<p style="text-align: center;"><b>Living Things and Habitats</b></p> <p>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.</p>
Working scientifically	<p>Children will work scientifically. Children will work scientifically to explore the uses of different materials e.g. the best material for a waterproof coat</p> <p>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</p>	<p>Children can use diagrams to show life cycles.  They can measure and observe how animals grow.  Children can create an owners guide to looking after a pet.</p>	<p>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.</p>	<p>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.</p>	<p>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</p>

					information about plants and animals to help answer simple questions. Children will also have the opportunity to understand and explore natural habitats and understand how living things and plants depend on each other.
<b>Year 3</b>	<p><b>Forces and magnets</b></p> <p>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 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,</p>	<p><b>Rocks</b></p> <p>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 will be able to recognise that soils are made from rocks and organic matter.</p>	<p><b>Light and Dark</b></p> <p>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. 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><b>Plants</b></p> <p>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 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><b>Animals including Humans</b></p> <p>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.</p>

Working scientifically	ring, button and horseshoe).				
	<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 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>	<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>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>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, labelled diagrams, keys, bar charts and tables.</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 results to draw conclusions and raise further questions, use scientific evidence to answer questions. They will design meals based on their understanding (<i>links to DT- Healthy Sandwiches</i>).</p>
Year 4	<p><b>States of matter</b></p> <p>Children will be taught how to compare and group materials together, according to whether they are solids, liquids or gases. Children will observe that</p>	<p><b>Sound.</b></p> <p>Children will identify how sounds are made, associating some of them with something vibrating. They will also recognise that vibrations from sounds</p>	<p><b>Electricity</b></p> <p>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,</p>	<p><b>Animals and humans</b></p> <p>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</p>	<p><b>Living things in the environment Habitats and Environment Changes</b></p> <p>Children will be taught how to recognise that living things can be grouped in a variety of ways. Thy will also explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. They will recognise that environments can change and that this can sometimes pose dangers to living things. Children will also</p>

	<p>some materials change state when they are heated or cooled, 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>travel through a medium to the ear. They will be given 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>	<p>wires, bulbs, switches and buzzers. They will also 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. 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>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>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>
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Working scientifically	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.	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	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.	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.	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 & negative) on environments.	
	<b>Forces</b>	<b>Earth and Space</b>	<b>Materials and States of Matter</b>		<b>Living things and their habitats</b>	<b>Animals including humans</b>
Year 5	Children will be taught that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. They will explore the effects of air resistance, water resistance and friction,	Children will learn and explore all about Earth and the Solar System. They will learn about the movement of the Earth, and other planets, relative to the Sun in the solar system. They will learn how the movement of the Moon	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 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		Children will be taught all about the life cycle of a mammal. They will describe the differences in 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.	Children will learn about the changes as humans develop to 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>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, 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>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>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>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>Children will work scientifically when investigating an egg drop, or falling paper cones, or cup-cake</p>	<p>Children will work scientifically when comparing the time of day at different places on the Earth through</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</p>	<p>When working scientifically, children will observe and compare the life cycles of plants and animals in their local environment with other</p>	<p>When working scientifically, children will research the gestation periods of other animals and comparing them with humans; by finding out</p>

Working scientifically	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.	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.	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.	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.	and recording the length and mass of a baby as it grows.
Year 6	<p style="text-align: center;"><b>Light</b></p> <p>Children will be taught light appears to travel in straight 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,</p>	<p style="text-align: center;"><b>Electricity</b></p> <p>Children will associate the brightness of a lamp or 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,</p>	<p style="text-align: center;"><b>Living things and their habitats</b></p> <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,</p>	<p style="text-align: center;"><b>Evolution and Inheritance</b></p> <p>Children will be taught that living things have 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</p>	<p style="text-align: center;"><b>Animals including Humans including Sex Education Blood and Transportation Heart and Health</b></p> <p>Children will be taught to identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. They will recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Children will learn to describe the ways in which nutrients and water are transported within animals, including humans.</p> <p style="text-align: center;"><b>For Sex Education – Use your PSHE plan- Jigsaw</b></p>

	<p>reflection and shadows. They will talk about what happens and make predictions.</p>	<p>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>amphibians, reptiles, birds and mammals). They will discuss reasons why living things are placed in one group and not another.</p>	<p>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 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.</p>	
Working Scientifically	<p>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. Design a laser system using accuracy and</p>	<p>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.</p>	<p>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 invertebrates 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 questions, including recognising and controlling</p>	<p>When working scientifically, children will observe and raising questions about local animals and how they are adapted to their environment; comparing how some living things are adapted to survive in extreme conditions, for example, cactuses, penguins and camels. They might analyse the advantages and disadvantages of specific adaptations, such as being on two feet rather than four, having a long or a short beak, having gills or lungs, tendrils on climbing plants, brightly coloured and scented flowers.</p> <p>Describe the process of natural selection using 'Which Beak? And Toothpick Graph Challenge.'</p> <p>Possible trip to World Museum (with workshop)</p>	<p>When working scientifically, children should build on their learning from years 3 and 4 about the main body parts and internal organs (skeletal, muscular and digestive system) to explore and answer questions that help them to understand how the circulatory system enables the body to function. They will have the opportunity to build a model circulatory system</p> <p>Children will learn how to keep their bodies healthy and how their bodies might be damaged – including how some drugs and other substances can be harmful to the human body. Pupils might work scientifically by: exploring the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health. Children will set up investigations to show what affects their heart rates and produce graphs to show results.</p>

	precision to guard a precious object.		variables where necessary.(Woodlice habitat test)		
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