

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Pre-School	<p>Topic: Seasons - Autumn and Winter</p> <p>EYFS - UtW - Materials and the world</p> <ul style="list-style-type: none"> • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Begin to understand the need to respect and care for the natural environment and all living things. • Talk about differences between materials and changes they notice. <ul style="list-style-type: none"> ◦ Autumn - exploring conkers, pumpkins and gourds. ◦ Describe what they see and feel. 	<p>Topic: Seasons - Autumn and Winter</p> <p>EYFS - UtW - Materials and the world</p> <ul style="list-style-type: none"> • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Begin to understand the need to respect and care for the natural environment and all living things. • Talk about differences between materials and changes they notice. <ul style="list-style-type: none"> ◦ Autumn - exploring conkers, pumpkins and gourds. ◦ Discuss the weather and what clothes we might need. 	<p>Topic: Once upon a time (Julia Donaldson)</p> <p>EYFS - UtW Materials and the world</p> <ul style="list-style-type: none"> • Talk about what they see, using wide vocabulary. • Explore and talk about different forces they can feel. <ul style="list-style-type: none"> ◦ Talk about differences between materials and changes they notice ◦ Swimming science investigation. ◦ Ask why questions. ◦ Science investigation 'puddles'. ◦ Making own storyline scenes using a variety of materials. ◦ Use different materials to construct houses. ◦ Explore different materials to make a bridge. ◦ Science investigation - grow green grass (cress). 	<p>Topic: Once upon a time (Julia Donaldson)</p> <p>EYFS - UtW - The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them. <ul style="list-style-type: none"> ◦ Woodland creatures - discuss the different habitats and provide resources for the children to make them for the toy animals. ◦ Discuss the pictures in the story. Talk about the environment ◦ Discuss similarities and differences between different animals. ◦ Talk about worm habitats. 	<p>Topic: Under the sea</p> <p>EYFS - UtW - The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals and plants • Understand the key features of the life cycle of plants and an animal. • Begin to understand the need to respect and care for the natural environment and all living things. <ul style="list-style-type: none"> ◦ Talk about the whale and the snail story and how important it is to look after the sea creatures ◦ I spy - hidden sea creatures in couscous. ◦ Turtle life cycle ◦ Under the sea charades - describe and guess the sea creatures. ◦ Sensory bin - sand, rocks, shells, pearls (beads). ◦ Share the shark documentary ◦ Share the octopus documentary - 	
Year R	<p>Topic: Once upon a Time...</p> <p>EYFS - UtW - The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them. • Describe what they see, hear and feel outside. <ul style="list-style-type: none"> ◦ Explore and describe the different textures and feel of mud, stones and water - linked to Bear Hunt story. ◦ Autumn - Exploring conkers, pumpkins and gourds. Describe what they see and feel. ◦ Floating and Sinking Investigation. 	<p>Topic: Once upon a Time...</p> <p>EYFS - UtW - The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them. • Describe what they see, hear and feel outside. <ul style="list-style-type: none"> ◦ Investigate pumpkins, seeds, skin, colour, shape, size. ◦ Make some different sized ice blocks. Place the ice in the outdoor learning area for the children to explore. ◦ Encourage discussion around the melting, feel and size of the ice. Relate to the snowman in The Snowman story. 	<p>Topic: Space/Superheroes</p> <p>EYFS - UtW - Past and Present</p> <ul style="list-style-type: none"> • Comment on images of familiar situations in the past. • Compare and contrast characters from stories, including figures from the past. <ul style="list-style-type: none"> ◦ Look at some pictures of space shuttles, rockets and moon landings from the past. ◦ Invite the children to ask questions about space. ◦ Discuss two famous astronauts from the past: Yuri Gagarin and Neil Armstrong. ◦ Compare to Yuri Gagarin and Neil Armstrong. 	<p>Topic: Space/Superheroes</p> <p>EYFS - UtW - The Natural World</p> <ul style="list-style-type: none"> • Understand the effect of changing seasons on the natural world around them. <ul style="list-style-type: none"> ◦ Look at different Spring images and what changes happen during springtime - compare to the other seasons. ◦ Examine how a winter tree changes during spring using video, drawings and pictures. ◦ Talk about ideas of new life in nature. Look at bulbs, spring flowers and buds. ◦ Discuss concept of new life in spring. Match 'animals and their babies' flashcards. Encourage children to explore how they have grown and changed since they were a baby. Compare photographs of themselves now and as babies and discuss the changes they can see. 	<p>Topic: Into the Wild... (Minibeasts and Wild Animals)</p> <p>The Natural World</p> <ul style="list-style-type: none"> • Understand the effect of changing seasons on the natural world around them. <ul style="list-style-type: none"> ◦ Minibeast adventure - investigate minibeasts on 'a bug hunt' ◦ Learn about the four seasons - draw/label what each season looks like ◦ To sort minibeasts according to their features. ◦ Minibeast and their habitats. Learn about the different habitats where you may find certain minibeasts. 	<p>Topic: Into the Wild... (Minibeasts and Wild Animals)</p> <p>The Natural World</p> <ul style="list-style-type: none"> • Understand the effect of changing seasons on the natural world around them. • Recognise some environments that are different to the one in which they live. <ul style="list-style-type: none"> ◦ Have a range of photographs of different habitats where Wild Animals live. ◦ Discuss what types of animals will live in certain habitats and why they think that. ◦ Discuss how the environment is different and the same to the one where we live.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	<p>Topic: Into the Woods</p> <p>Plants</p> <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. <p>Seasonal Changes: Autumn to Winter</p> <ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies. <p>Working Scientifically</p> <ul style="list-style-type: none"> gathering and recording data to help in answering questions. using their observations and ideas to suggest answers to questions performing simple tests 	<p>Topic: Fire and Ice</p> <p>Everyday materials</p> <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 based on their simple physical properties. <p>Seasonal Changes: Winter to Spring</p> <ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies. <p>Working Scientifically</p> <ul style="list-style-type: none"> gathering and recording data to help in answering questions. using their observations and ideas to suggest answers to questions performing simple tests asking simple questions and recognising that they can be answered in different ways 	<p>Topic: Wild and Wonderful - Australia</p> <p>Animals, including humans</p> <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) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. <p>Seasonal Changes: Spring to Summer</p> <ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies. <p>Working Scientifically</p> <ul style="list-style-type: none"> identifying and classifying 			
Year 2	<p>Topic: Sailing the Seven Seas</p> <p>Materials</p> <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. <p>Working Scientifically</p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions. <p>Seasons Recap</p> <ul style="list-style-type: none"> -observe changes across the four seasons -observe and describe weather associated with the seasons and how day length varies 	<p>Topic: China</p> <p>Living things and their habitats</p> <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. <p>Working Scientifically</p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways identifying and classifying using their observations and ideas to suggest answers to questions 	<p>Topic: At the Bottom of the Garden</p> <p>Plants (including recap of Y1)</p> <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. <p>Animals including humans (including recap of Y1)</p> <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. <p>Working Scientifically</p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment performing simple tests identifying and classifyi using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions. 			

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Year 3	<p>Topic: Ages Ago</p> <p>Animals including humans</p> <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 <p>(combined with DT objectives on healthy eating)</p>	<p>Topic: Ages Ago</p> <p>Rocks</p> <ul style="list-style-type: none"> compare and group together different kinds of rocks on the basis of their appearance and simple physical properties describe in simple terms how fossils are formed when things that have lived are trapped within rock recognise that soils are made from rocks and organic matter. 	<p>Topic: Into the Rainforest</p> <p>Light</p> <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. 	<p>Topic: Into the Rainforest</p> <p>Plants</p> <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. 	<p>Topic: An Italian Adventure</p> <p>Forces and magnets</p> <ul style="list-style-type: none"> compare how things move on different surfaces notice that some forces need contact between two objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract some materials and not others 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 two poles predict whether two magnets will attract or repel each other, depending on which poles are facing. 	<p>Topic: An Italian Adventure</p> <p>Animals including humans</p> <ul style="list-style-type: none"> identify that humans and some other animals have skeletons and muscles for support, protection and movement.
	<p>Working scientifically</p> <ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings. 					
Year 4	<p>Topic: Anglo-Saxons and Vikings</p> <p>Animals - including humans</p> <ul style="list-style-type: none"> recognise that humans have different types of teeth name human teeth; understand the function of human teeth compare teeth in different animals identify the different types of teeth in humans and their simple functions construct and interpret a variety of food chains, identifying producers, predators and prey 	<p>Topic: Benin Kingdom</p> <p>Living things and their habitats</p> <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 	<p>Topic: Benin Kingdom</p> <p>Electricity</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 	<p>Topic: Ancient Greece</p> <p>States of Matter</p> <ul style="list-style-type: none"> compare and group materials together, according to whether they are solids, liquids or gases observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature 	<p>Topic: Ancient Greece</p> <p>Sound</p> <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 	

Working scientifically

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings

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Year 5	Topic: Earth and Beyond Space: <ul style="list-style-type: none">• explain why we know the Sun, Earth and Moon are spherical• name and describe features of the planets in our solar system.• order the planets in our solar system To explain how planets move in our solar system.• identify scientific evidence which does or does not provide evidence for an idea or argument• explain day and night and the apparent movement of the sun across the sky• investigate night and day in different parts of the Earth• report and present findings from enquiries• explain the movement of the Moon.	Topic: Earth and Beyond Forces <ul style="list-style-type: none">• identify forces acting on objects• explore the effect gravity has on objects and how gravity was discovered• investigate the effects of air resistance.• explore the effects of water resistance• investigate the effects of friction.• explore and design mechanisms.	Topic: Local history study Scientists and inventors <ul style="list-style-type: none">• find out about the work of naturalists and animal behaviourists (David Attenborough and Jane Goodall)• understand how vaccines work (Edward Jenner)• explore the life process of reproduction in some plants and animals (Eva Crane)	Topic: Local history study Living things and their habitats <ul style="list-style-type: none">• describe the life process of reproduction in some plants and animals• describe the life cycle of a mammal• describe sexual reproduction in mammals• describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird	Topic: Ancient China Materials <ul style="list-style-type: none">• compare and group together everyday materials on the basis of their properties, including their hardness, transparency and response to magnets• give reasons based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic• compare and group together everyday materials based on thermal and electrical conductivity• know that some materials will dissolve in water to form a solution	Topic: Ancient China Animals, including humans <ul style="list-style-type: none">• describe the changes as humans develop to old age• Record data using bar charts and line graphs• Describe the main changes that occur through puberty• Identify the changes that take place in old age• Understand the gestation period for animals• understand the life expectancy of animals

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Year 6	<p>Topic: Victorians</p> <p>Evolution and inheritance</p> <ul style="list-style-type: none"> Living things have changed over time Living things produce offspring which vary and are not identical to their parents Animals and plants are adapted to suit their environment and that adaption may lead to evolution <p>Working scientifically</p> <ul style="list-style-type: none"> Record data and results using scientific diagrams and labels, classification keys, table and bar and line graphs Report and present findings from enquiries: <ul style="list-style-type: none"> conclusions, causal relationships and explanation of results 	<p>Topic: Victorians</p> <p>Electricity</p> <ul style="list-style-type: none"> Associate the brightness of a lamp/volume of a buzzer to the number and voltage of cells used in the circuit Compare and give reasons for variations in how components function Use recognised symbols when representing a simple circuit in a diagram <p>Working scientifically</p> <ul style="list-style-type: none"> Record data and results using scientific diagrams and labels, classification keys, table and bar and line graphs Use test results to make predictions and set up further comparative and fair tests Report and present findings from enquiries: conclusions, causal relationships and explanation of results 	<p>Topic: Comparative Study UK, Italy, Mexico</p> <p>Light</p> <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/reflect light Explain that we see things because light travels from light sources to our eyes Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them <p>Scientist and Inventors unit explored when appropriate</p> <ul style="list-style-type: none"> Stephen Hawking Libbie Hyman Marie Maynard Daly Alexander Fleming Mary Leakey Daniel Hale Williams <ul style="list-style-type: none"> Steve Jobs <p>Working scientifically</p> <ul style="list-style-type: none"> Record data and results using scientific diagrams and labels, classification keys, table and bar and line graphs Use test results to make predictions and set up further comparative and fair tests Report and present findings from enquiries: conclusions, causal relationships and explanation of results 	<p>Topic: Earth Matters</p> <p>Living things and their habitats</p> <ul style="list-style-type: none"> Describe how living things are classified into broad groups according to common observable characteristics Give reasons for classifying plants and animals based on specific characteristics <p>Working scientifically</p> <ul style="list-style-type: none"> Record data and results using scientific diagrams and labels, classification keys, table and bar and line graphs 	<p>Topic: Earth Matters</p> <p>Animals, including humans</p> <ul style="list-style-type: none"> Identify and name parts of the human circulatory system and describe functions of the heart, blood vessels and blood Recognise the impact of diet, exercise, drugs and lifestyle on the way bodies function Describe the ways in which water and nutrients are transported within animals, including humans <p>Working scientifically</p> <ul style="list-style-type: none"> Report and present findings from enquiries: conclusions, causal relationships and explanation of results 	