



Science curriculum overview 2020 – 2021 Cycle 1

Year group	Autumn topics		Spring topics		Summer topics	
	Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
<u>EYFS</u>	<p>To talk about some of the things they have observed, such as plants, animals, natural and found objects</p> <p>To look closely at similarities, differences, patterns and change.</p>	<p>To show care and concern for living things and the environment</p> <p>To know about similarities and differences in relation to living things.</p> <p>They talk about the features of their own immediate environment and how environments might vary from one another</p>	<p>No science focus this half term</p>	<p>To be able to talk about the features of their own immediate environment and how environments might vary from one to another</p> <p>Habitats- lives on land, lives in the sea.</p> <p>Look at habitats of sea creatures – similarities and difference of pond and woodland animals.</p>	<p>Planting and growing</p> <p>Talk about some of the things they have observed such as plants, animals, nature and found objects.</p> <p>They can make observations of animals and plants and explain why some things occur, and talk about changes, including experiments.</p> <p>Cooking different types of vegetables.</p> <p>Look at properties hard/soft vegetables.</p>	<p>Living things and the environment.</p> <p>Minibeast hunt – sorting and classification.</p>
<u>Year 1/2</u>	<p style="text-align: center;">Working Scientifically:</p> <ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways 					

	<ul style="list-style-type: none"> • Observing closely, using simple equipment <ul style="list-style-type: none"> • 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. 					
<u>Year 1/2</u>	<p>Living Things and Their habitats</p> <p>Explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats</p>	<p>Animals, including humans</p> <p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p>Link to animals common to the North East e.g. grey seal, deer, red and grey</p>	No science focus this half term	<p>Materials</p> <p>distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1)</p> <p>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</p>	<p>Animals, including humans</p> <p>Plants</p> <p>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats (Y2)</p>	<p>Seasonal Changes</p> <p>Observe changes across the four seasons.</p> <p>Observe and describe weather associated with the seasons and how day length varies. (Y1)</p>

	<p>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food</p>	<p>squirrel</p> <p>identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</p> <p>Notice that animals, including humans, have offspring which grow into adults</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>		<p>how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2)</p>		
<p><u>Year 3/4</u></p>	<p style="text-align: center;">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, 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

<p><u>Year 3/4</u></p>	<p>Living Things and Their habitats</p> <p>Plants Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>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</p> <p>Investigate the way in which water is transported within plants</p>	<p>Animals, including humans</p> <p>Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> <p>Describe the simple functions of the basic parts of the digestive system in humans</p>	<p>States of matter</p> <p>Pupils should be taught to compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>To 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).</p>	<p>States of matter</p> <p>To identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p> <p>Pupils should 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>Electricity</p> <p>Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>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.</p>	<p>Sound</p> <p>Identify how sounds are made, associating some of them with something vibrating.</p> <p>Recognise that vibrations from sounds travel through a medium to the ear.</p> <p>Find patterns between the pitch of a sound and features of the object that produced it.</p> <p>Find patterns between the volume of a sound and the</p>
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	<p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p> <p>Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Identify the different types of teeth in humans and their simple functions</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and</p>			<p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors.</p>	<p>strength of the vibrations that produced it.</p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p>
<p><u>Year 5/6</u></p>	<p style="text-align: center;">Working Scientifically</p> <ul style="list-style-type: none"> • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs <ul style="list-style-type: none"> • Using test results to make predictions to set up further comparative and fair tests • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in 					

	<p>oral and written forms such as displays and other presentations</p> <ul style="list-style-type: none"> Identifying scientific evidence that has been used to support or refute ideas or arguments 					
Year 5/6	<p>Living Things and Their habitats</p> <p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the life process of reproduction in some plants and animals.</p> <p>Link to animals and plants found in the North East e.g. Grey Seal, Red Fox, Badger</p>	<p>Animals, including Humans</p> <p>Describe the changes as humans develop to old age.</p> <p>Link to the lives of people in the North East and what can affect their health – jobs, housing and diet.</p> <p>Draw a timeline to indicate stages in the growth and development of humans.</p> <p>Learn about the changes experienced in puberty. (Check content against RSE Policy)</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function (Check content against PSHE Policy)</p> <p>Link to the lives of</p>	<p>Animals, including Humans</p> <p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans</p>	<p>Evolution & Inheritance</p> <p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>	<p>Living Things and Their habitats</p> <p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics.</p>	<p>No science focus this half term</p>

		people in the North East and what can affect their health – jobs, housing and diet.				
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