

Homefield Primary School

Science

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Who am I?	Celebrations	Polar Places	Plants and Animals	On Safari	Holiday
Seasonal change is developed over the year in six sections, each covering a 2-month block. NC: - observe changes across the 4 seasons - observe & describe weather associated with the seasons and how day length varies.	NC: - Identify, name, draw and label the basic parts of the human body. - Say which part of the body is associated with each sense. Working Scientifically: 2, 4, 6	 NC: Say which part of the body is associated with each sense. 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. Identify and describe the basic structure of a variety of common plants, including trees. Working Scientifically: 2, 3, 4, 5, 6 	 NC: Identify and name a variety of animals including fish, amphibians, reptiles, birds and mammals. Identify and name common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals. Describe the simple properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple properties. Working Scientifically: 1, 3, 4, 5 	 NC: 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. 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. Working Scientifically: 1, 2, 3, 4, 5, 6 	 NC: Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. 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). Working Scientifically: 1, 2, 3, 4, 6 	 NC: 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 or omnivores. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). 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 Working Scientifically: 1, 2, 3, 4, 5, 6
Year 2	Our Local Environment NC: - 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 micro-habitats - Describe how animals obtain their food from plants and other	Materials Monster NC: - 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. Working Scientifically: 2. 3, 4, 5, 6	Healthy Me NC: - Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. - Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Working Scientifically: 2, 3, 4, 5, 6,	Little Masterchefs NC: - Find out about and describe the basic needs of humans for survival (water, food and air). - Describe the importance for humans of eating the right amounts of different types of food, and hygiene. - Observe and describe how seeds and bulbs grow into mature plants. - Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	Young Gardeners NC: - 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 Working Scientifically: 1, 2, 3, 4, 5, 6	Squash, Bend, Twist and Stretch NC: - Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Working Scientifically: 2, 3, 4, 5, 6,



Market Street						
Year 3	animals, using the idea of a simple food chain, and identify and name different sources of food Working Scientifically: 1, 2, 3, 4, 5, 6 Food and Our Bodies NC:	How Does Your Garden Grow?	Forces and Magnets	Working Scientifically: 2, 3, 4, 5, 6 Light and Shadows NC:	Rocks and Fossils	The Nappy Challenge Additional unit
	 Identify that animals, including humans, need the right types and amount of nutrition and that they cannot make their own food: they get nutrition from what they eat. Identify that humans and some other animals have skeletons and muscles for support, protection and movement. Working Scientifically: 4, 5, 6 	 NC: 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. Working Scientifically: 1, 2, 3, 4, 5, 6, 7, 8, 9 	 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. Working Scientifically: 1, 2, 3, 4, 5, 7 	 Recognise that we 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 the eyes. Recognise that shadows are formed when the light from a light source is blocked by a solid object. Find patterns in the way that the sizes of shadows change. Working Scientifically: 2, 3, 6, 7, 	 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. Working Scientifically: 1, 2, 3, 4, 6 	Working Scientifically: 1, 2, 3, 4, 7, 9
Year 4	Living Things	Looking at States	The Big Build	Teeth and Eating	What's that Sound?	Power it Up
	NC: - 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. Working Scientifically:	NC: - 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	Additional unit Working Scientifically: 1, 2, 3, 4, 5, 6, 7, 8, 9	NC: - Describe the simple functions of the basic parts of the digestive system in humans. - Identify the different types of teeth in humans and their simple functions. - Construct and interpret a variety of food chains, identifying producers, predators and prey. Working Scientifically: 1, 2, 3, 4, 5, 6, 7, 8, 9	NC: - 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.	NC: - 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.



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	1, 2, 3, 4, 5, 6, 7, 8, 9	temperature. Working Scientifically: 1, 2, 3, 4, 5, 6, 7, 8, 9			 Recognise that sounds get fainter as the distance from the sound source increases. Working Scientifically: 1, 2, 3, 4, 5, 6, 7, 8, 9 	 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. Working Scientifically: 1, 4, 5
Year 5	Material World NC: - Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets. - Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. - Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. - Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. - Demonstrate that dissolving, mixing and changes of state are reversible changes. Working Scientifically: 1, 2, 3, 4, 5, 6	Amazing Changes NC: - Demonstrate that dissolving, mixing and changes of state are reversible changes. - Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. Working Scientifically: 1, 2, 3, 4, 5, 6	Out of this World NC: - Describe the movement of the Earth and other planets relative to the Sun in the Solar System. - Describe the movement of the Moon relative to the Earth. - Describe the Sun, Earth and Moon as approximately spherical bodies. - Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. Working Scientifically: 1, 2, 3, 4, 5, 6	Let's Get Moving NC: - Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. - Identify the effects of air resistance, water resistance and friction, that act between moving surfaces - Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. Working Scientifically: 1, 2, 3, 4, 5, 6	Growing Up and Growing Old NC: - Describe the changes as humans develop to old age. Working Scientifically: 1, 3, 5	Circle of Life NC: - Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. - Describe the life process of reproduction in some plants and animals. Working Scientifically: 1, 2, 4, 5, 6
Year 6	Classifying Living Things NC: - Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants	Light NC: - 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	Electricity NC: - Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. - Compare and give reasons for variations in how components	Healthy Bodies NC: - Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.	Evolution and Inheritance NC: - Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.	The Titanic Additional unit Working Scientifically: 1, 2, 3, 5



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	and animals	give out or reflect light into the	function, including the brightness	- Recognise the impact of diet,	- Recognise that living things	
	 Give reasons for classifying 	eye.	of bulbs, the loudness of buzzers	exercise, drugs and lifestyle on	produce offspring of the same	
	plants and animals based on	 Explain that we see things 	and the on / off position of	the way their bodies function.	kind, but normally offspring vary	
	specific characteristics.	because light travels from light	switches.	 Describe the ways in which 	and are not identical to their	
		sources to our eyes or from light	 Use recognised symbols when 	nutrients and water are	parents.	
	Working Scientifically:	sources to objects and then to	representing a simple circuit in a	transported within animals,	 Identify how animals and plants 	
	1, 2, 3, 4, 5, 6	our eyes.	diagram.	including humans.	are adapted to suit their	
		 Use the idea that light travels in 			environment in different ways	
		straight lines to explain why	Working Scientifically:	Working Scientifically:	and that adaptation may lead to	
		shadows have the same shape as	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6	evolution.	
		the objects that cast them.				
					Working Scientifically:	
		Working Scientifically:			6	
		1, 2, 3, 4, 5, 6				

Key for Working Scientifically Skills

KS1:

1) asking simple questions and recognising that they can be answered in different ways

2) observing closely, using simple equipment

3) performing simple tests

4) identifying and classifying

5) using their observations and ideas to suggest answers to questions

6) gathering and recording data to help in answering questions.

LKS2:

1) asking relevant questions and using different types of scientific enquiries to answer them

2) setting up simple practical enquiries, comparative and fair tests

3) making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers

4) gathering, recording, classifying and presenting data in a variety of ways to help in answering questions

5) recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

6) reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions

7) using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions

8) identifying differences, similarities or changes related to simple scientific ideas and processes

9) using straightforward scientific evidence to answer questions or to support their findings.

UKS2:

1) planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary

2) taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate

3) recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs

4) using test results to make predictions to set up further comparative and fair tests

5) reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations 6) identifying scientific evidence that has been used to support or refute ideas or arguments.