

Science	AUTUMN		SPRING		SUMMER		Key Objectives:	Key Vocabulary:
Year	1	2	1	2	1	2		
3							<p><u>Working Scientifically (Y3 and Y4):</u></p> <ul style="list-style-type: none"> I can ask relevant scientific questions I can use observations and knowledge to answer scientific questions I can set up a simple enquiry to explore a scientific question I can set up a test to compare two things I can set up a fair test and explain why it is fair I can make careful and accurate observations, including the use of standard units I can use equipment, including thermometers and data loggers to make measurements I can gather, record. Classify and present data in different ways to answer scientific questions I can use diagram keys, bar charts and tables using scientific language I can use findings to report in different ways, including oral and written explanations, presentation I can draw conclusions and suggest improvements I can make a prediction with a reason I can identify differences, similarities and changes related to enquiry <p><u>Biology</u> <u>Plants:</u></p> <ul style="list-style-type: none"> I can describe the function of different parts of flowering plants and trees I can explore and describe the needs of different plants for survival I can explain and describe how water is transported in plants I can describe the plant life cycle, especially the importance of flowers <p><u>Animals, including humans:</u></p> <ul style="list-style-type: none"> I can explain the importance of a nutritious, balanced diet I can explain how nutrients, water and oxygen are transported within animals and humans 	
			Parts of a plant	What a plant needs				
		Animals including humans						

	Magnets and Forces				Rocks and soils including fossils	Light and Shadows	<ul style="list-style-type: none"> • I can describe and explain the skeletal system of a human • I can describe and explain the muscular system of a human • I can describe the purpose of a skeleton in humans and animals <p><u>Chemistry</u></p> <p><u>Rocks:</u></p> <ul style="list-style-type: none"> • I can compare and group rocks based on their appearance and physical properties, giving a reason • I can describe how fossils are formed • I can describe how soil is made • I can describe and explain the difference between sedimentary and igneous rock <p><u>Physics</u></p> <p><u>Light:</u></p> <ul style="list-style-type: none"> • I can describe what dark is (the absence of light) • I can explain that light is needed in order to see • I can explain that light is reflected from a surface • I can explain and demonstrate how a shadow is formed • I can explore shadow size and explain • I can explain the danger of direct sunlight and describe how to keep protected <p><u>Forces and magnet:</u></p> <ul style="list-style-type: none"> • I can explore and describe how objects move on different surfaces • I can explain how some forces require contact and some do not, giving examples • I can explore and explain how objects attract and repel in relation to objects and other magnets • I can predict whether objects will be magnetic and carry out an enquiry to test this out • I can describe how magnets work • I can predict whether magnets will attract or repel and give a reason 	
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4	Dangers to Living things	Classifying Living Things		Human Nutrition		<p><u>Working Scientifically (Y3 and Y4):</u></p> <ul style="list-style-type: none"> • I can ask relevant scientific questions • I can use observations and knowledge to answer scientific questions • I can set up a simple enquiry to explore a scientific question • I can set up a test to compare two things • I can set up a fair test and explain why it is fair • I can make careful and accurate observations, including the use of standard units • I can use equipment, including thermometers and data loggers to make measurements • I can gather, record. Classify and present data in different ways to answer scientific questions • I can use diagram keys, bar charts and tables using scientific language • I can use findings to report in different ways, including oral and written explanations, presentation • I can draw conclusions and suggest improvements • I can make a prediction with a reason • I can identify differences, similarities and changes related to enquiry <p><u>Biology</u></p> <p><u>Living things and their habitats:</u></p> <ul style="list-style-type: none"> • I can group living things in different ways • I can use classification keys to group, identify and name living things • I can create classification keys to group, identify and name living things (for others to use) • I can describe how changes to an environment could endanger living things. <p><u>Animals, including humans:</u></p> <ul style="list-style-type: none"> • I can identify and name parts of the human digestive system • I can describe the functions of the organs in the human digestive system • I can identify and describe the different types of teeth in humans • I can use food chains to identify producers, predators and prey • I can construct food chains to identify producer, predators and prey. 	
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			Changes of State				<p><u>Chemistry</u> <u>States of matter:</u></p> <ul style="list-style-type: none"> • I can group materials based on their state of matter (solids, liquids, gas) • I can describe how some materials can change state • I can explore how materials change state • I can measure the temperature at which materials change state • I can describe the water cycle • I can explain the part played by evaporation and condensation in the water cycle <p><u>Physics</u> <u>Sound:</u></p> <ul style="list-style-type: none"> • I can describe how sound is made • I can explain how sound travels from a source to our ears • I can explain the place of vibration in hearing • I can explore the correlation between pitch and the object producing a sound • I can explore the correlation between the volume of a sound and the strength of the vibrations that produced it • I can describe what happens to a sound as it travels away from its source <p><u>Electricity:</u></p> <ul style="list-style-type: none"> • I can identify and name appliances that require electricity to function • I can construct a series circuit • I can identify and name the components in a series circuit (including wires, cells, bulbs, switches and buzzers) • I can draw a circuit diagram • I can predict and test whether a lamp will light within a circuit • I can describe the function of a switch in a circuit • I can describe the difference between a conductor and insulators; giving examples of each 	
						Sound		
					Electricity			

5			Materials	Types of change	Life Cycles	<p><u>Working Scientifically (Y5 and Y6):</u></p> <ul style="list-style-type: none"> • I can plan different types of scientific enquiry • I can control variables in an enquiry • I can measure accurately and precisely using a range of equipment • I can record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • I can use the outcome of test results to make predictions and set further comparative fair test • I can report findings from enquiries in range of ways • I can explain the conclusion from an enquiry • I can explain causal relationships in an enquiry • I can relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory • Read, spell and spell scientific vocabulary accurately <p><u>Biology</u></p> <p><u>Living things and their habitats:</u></p> <ul style="list-style-type: none"> • I can describe the life cycles of different living things, e.g. mammal, amphibian, insect, bird • I can describe the differences between different life cycles • I can describe the process of preproduction in plants • I can describe the process of reproduction in animals <p><u>Animals, including humans:</u></p> <ul style="list-style-type: none"> • I can create a timeline to indicate stages of growth in humans <p><u>Chemistry</u></p> <p><u>Properties f changes of materials:</u></p> <ul style="list-style-type: none"> • I can compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, (electrical and thermal), and response to magnets) • I can describe how materials dissolve to form a solution; explaining the process of dissolving 	
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	Earth & Space	Forces					<ul style="list-style-type: none"> • I can describe and show how to recover a substance from a solution • I can describe how some materials can be separated • I can demonstrate how materials can be separated (e.g. filtering, sieving and evaporating) • I know and can demonstrate that some changes are reversible and some are not • I can explain how some changes result in the formation of a new material and that is usually irreversible • I can discuss reversible and irreversible changes • I can give evidenced reasons why materials should be used for specific purposes <p><u>Physics</u></p> <p><u>Earth and space:</u></p> <ul style="list-style-type: none"> • I can describe and explain the movement of the Earth and other planets relative to the sun • I can describe and explain the movement of the moon relative to the Earth • I can and demonstrate how night and day are created • I can describe the sun, Earth and moon (using the term spherical) <p><u>Forces:</u></p> <ul style="list-style-type: none"> • I can explain what gravity is and the impact on our lives • I can identify and explain the effect of air resistance • I can identify and explain the effect of water resistance • I can identify and explain the effect of friction • I can explain how levers, pulleys and gears allow a smaller force have a greater effect 	
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6	Our Bodies		Classifying Living Things				<p><u>Working Scientifically (Y5 and Y6):</u></p> <ul style="list-style-type: none"> • I can plan different types of scientific enquiry • I can control variables in an enquiry • I can measure accurately and precisely using a range of equipment • I can record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • I can use the outcome of test results to make predictions and set further comparative fair test • I can report findings from enquiries in range of ways • I can explain the conclusion from an enquiry • I can explain casual relationships in an enquiry • I can relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory • Read, spell and spell scientific vocabulary accurately <p><u>Biology</u></p> <p><u>Living things and their habitats:</u></p> <ul style="list-style-type: none"> • I can classify living things into broad groups according to observable characteristics and based on similarities and differences • I can describe how living things have been classified • I can give reasons for classifying plants and animals in a specific way <p><u>Animals, including humans:</u></p> <ul style="list-style-type: none"> • I can identify and name the main parts of the human circulatory system • I can describe the function of the heart, blood vessels and blood • I can discuss the impact of diet, exercise, drugs and life style on health • I can describe the ways in which nutrients and water are transported in animals, including humans • <p><u>Evolution and inheritance:</u></p>	
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		Light and Sight		Electricity	Evolution and inheritance	<ul style="list-style-type: none"> • I can describe how the earth and living things have changes over time • I can explain how fossils can be used to find out about the past • I can explain about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents) • I can explain how animals and plants are adapted to suit their environment • I can link adaptation over time to evolution • I can explain evolution <p><u>Physics</u></p> <p><u>Light:</u></p> <ul style="list-style-type: none"> • I can explain how light travels • I can explain and demonstrate how we see objects • I can explain why shadows have the same shape as the object that casts them • I can explain how simple optical instruments work, e.g. periscope, telescope, binoculars, mirror, magnifying glass etc. <p><u>Electricity:</u></p> <ul style="list-style-type: none"> • I can explain how the number & voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer • I can compare and give reasons for why components work and do not work in a circuit • I can draw circuit diagrams using correct symbols 	
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