



Science –KS1
Progression of Knowledge and Skills



*Please note – all topics covered in science must include an investigation element alongside the knowledge content

	<u>Year 1</u>			<u>Year 2</u>		
Term	Autumn	Spring	Summer	Autumn	Spring	Summer
Topic	All about me Once upon a time	Dragons Trees and Seasons	All creatures great and small Journeys – near and far	Homes and Habitats Sparkle and Shine	Weird worlds and wild weather Sowing and growing	Superheroes The Seven Seas
Working Scientifically (additionally see assessment criteria at the foot of the document)	<p>During all topics and areas of study across Year 1 and Year 2 pupils should be involved in working scientifically through:</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 question - Gathering and recording data to help in answering questions - Pupils should also read and spell scientific vocabulary at a level consistent with their increasing word and spelling knowledge at key stage 1 <p><u>A KS1 scientist will:</u></p> <ul style="list-style-type: none"> I know how to ask simple scientific questions I know how to use simple equipment to make observations I know how to carry out simple tests I know how to identify and classify things I know how to explain to others what I have found out I know how to use simple data to answer questions 					
Biology	<p><u>Plants:</u> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and describe the basic structure of common flowering plants, including trees.</p> <p><u>Animals (including humans):</u> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify and name of 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 and name the basic parts of the human body and say which part of the body is associated with each sense.</p> <p><u>Living things and habitats:</u> Sort living and non-living things.</p>			<p><u>Plants:</u> 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> <p><u>Animals (including humans):</u> 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, air and food) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p> <p><u>Living things and habitats:</u> 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</p>		



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				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	
Plants		<p><u>Spring 2</u> *I know and name a variety of common wild and garden plants. *I know and name the petals, stem, leaves and root of a plant. *I know and name the roots, trunk, branches and leaves of a tree.</p>			<p><u>Spring 2</u> *I know how seeds and bulbs grow into plants *I know what plants need in order to grow and stay healthy (water, light and suitable temperature)</p>
Animals, including humans	<p><u>Autumn 1</u> *I know how to name parts of the human body that I can see *I know how to link the correct part of the human body to each sense.</p>	<p><u>Spring 2</u> *I know how to sort living and non-living things</p>	<p><u>Summer 1</u> *I know and name a variety of animals including fish, amphibians, reptiles, birds and mammals. *I classify and know animals by what they eat (carnivore, herbivore and omnivore) *I know how to sort animals into categories (including fish, amphibians, reptiles, birds and mammals) *I know how to sort living and non-living things</p>		<p><u>Summer 1 and 2</u> *I know the basic stages in a life cycle for animals (including humans) *I know what animals and humans need to survive *I know why exercise, a balanced diet and good hygiene are important for humans (Summer 1)</p>
Living things and their habitats				<p><u>Autumn 1</u> *I identify things that are living, dead and never lived *I know how a specific habitat provides for the basic needs of things living there (plants and animals) *I identify and name plants and animals in a range of habitats *I match living things to their habitat</p>	<p><u>Summer 2</u> *I identify and name plants and animals in a range of habitats *I match living things to their habitat</p>



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				<ul style="list-style-type: none"> *I know how animals find their food *I name some different sources of food for animals *I know and can explain a simple food chain. 		
Chemistry	<p>Everyday materials: Distinguish between an object and the material it is made from 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 material on the basis of their simple physical properties</p>			<p>Everyday materials: 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>		
Everyday materials		<p>Spring 1 *I distinguish between an object and the material it is made from *I know the materials that an object is made from *I know the difference between wood, plastic, glass, metal, water and rock *I know about the properties of everyday materials *I group objects based on the materials they are made from</p>				
Uses of everyday materials				<p>Autumn 2 *I identify and name a range of materials including wood, plastic, metal, glass, brick, rock, paper and cardboard *I know why a material might or might not be used for a specific job *I know how materials can be changed by squashing, bending, twisting and stretching</p>		



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Physics	Seasonal changes: Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies		Seasonal changes: No specific content coverage however this will be referred to continually as the seasons change		
Seasonal changes		<p>Spring 2</p> <ul style="list-style-type: none"> *I observe and know about the change in the seasons *I name the seasons and know about the type of weather in each season 			
Impact/key assessment criteria:	<p>Through investigating the knowledge and skills above a Year 1 Scientist will be able to:</p> <ul style="list-style-type: none"> - Know how to ask and answer simple scientific questions (eg. I ask questions such as: Why are flowers different colours? Why do some animals eat meat and others not?) - Know how to use simple equipment to make observations (eg. I use a hand lens to see things more clearly; I use binoculars to help me see animals that are in the distance) - Know how to carry out simple tests (eg I set up a test to see which materials keeps things warmest; I know if my test has been successful and can say what I have learned) - Know how to identify and classify things (eg I group things according to a criteria I have been asked to consider like animals and plants) - Know how to explain to others what they have found out (eg I explain to someone what I have learnt from an investigation I have been involved with; I draw conclusions from the answers to the question I have asked) - Know how to use simple data to answer questions (eg I use measures (within Yr 1 mathematical limits) to help me find out more about the investigations I am considering) 		<p>Through investigating the knowledge and skills above a Year 2 Scientist will be able to:</p> <ul style="list-style-type: none"> - Know how to ask and answer simple scientific questions (eg Why do some trees lose their leaves in Autumn and others do not? How long are roots of tall trees? Why do some animals have underground habitats?) - Know how to use simple equipment to make observations (eg I use equipment such as thermometers and rain gauges to help observe changes too my local environment as the year progresses; I use microscopes that have been created for my age group to find out more about small creatures and plants.) - Know how to carry out simple tests (eg with help, I find out how old a tree is; I know how to set up a fair test and do so when finding out about how seeds grow best.) - Know how to identify and classify things (eg I group things according to given criteria, ie deciduous and coniferous trees; I classify items such as toys according to the material used to make them) - Know how to explain to others what they have found out (eg. I explain to someone why my investigation is fair; I draw conclusions from my fair tests and can explain what I have found out) - Know how to use simple data to answer questions (eg. I use measure (within Yr 2 mathematical limits) to help me find out more about the investigations I am engaged with) 		