

Key Stage 1 Science Knowledge progression.



	Concept	Year R	Year 1	Year 2
Biology	Working scientifically	Ask questions about why things happen and how things work.	- 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 - Observe closely, using simple equipment - Asking simple questions and recognising that they can be answered in different ways - 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	- 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 - 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
	Understand Plants		- Plants start growing from a seed or bulb. - All plants need water, light and warmth to grow and survive. - A seed produces roots to allow water to get into the plant and shoots to produce leaves to collect the sunlight. - 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	- Seeds need light water (and air) to grow. - To begin to understand the stages in the life of a flowering plant. - To know that flowering plants reproduce. - To recognise what plants need to help them grow and to name the different parts - To know that plants need light and water to grow and survive. - To recognise what plants need to help them grow. To know that plants need light and water to grow and survive.

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				• 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
	Understand animals and humans		• Learn the names of main body parts – head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth. • Label body parts • 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	• Describe the human life cycle. • Understand that humans grow and are able to do more things as they get older. • List the basic needs of animals. • Talk about treating each other and animals with care and respect. • 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
	Investigate living things	• Examine objects and living things to find out more about them. • Notice patterns • Show an awareness of change. • Find out about and identify some features of living things, objects and events they observe.	• To know the difference between animals we keep as pets and animals that are kept on a farm. • To identify and name the common parts and different parts that a human and animal have. • To identify sea creatures	• Make similarities between things that are dead and alive. • Make similarities between plants and animals. • To know what we need to stay healthy and alive. • Discuss the differences between things that are living, have never

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		- Children to look closely at the world around them making observations of animals and plants. - They describe and ask questions about what they see and hear and begin to explain why some things occur. - Children look closely at the world around them making observations of animals and plants. - They describe and ask questions about what they see and hear and begin to explain why some things occur. - The children will collect and manipulate different materials to construct their nest. - Children to look closely at the world around them making observations of animals and plants. - They describe and ask questions about what they see and hear and begin to explain why some things occur. - They will look closely at the similarities, differences and changes they see compared with their previous observations.	- To identify differences in habitats for animals that live under the water - To identify groups of animals and classify them according to their diet. - observe changes across the 4 seasons - observe and describe weather associated with the seasons and how day length varies	lived and things that are no longer living. - To know that all living things are made up of 'cells' - To know the 7 living processes - Relate the living processes to animals and plants. - To know about different habitats. - To know why animals chose to live in different habitats. - Find and classify different plants and animals. - 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
	Understand evolution and inheritance			

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Chemistry	Investigate materials	- Investigate objects and materials by using all of their senses. - Look closely at similarities, differences, patterns and change.	- Introduction to material types- describing materials - Sorting objects and using materials - Identifying objects made of common materials - Find the best material for a broken umbrella by performing a simple test - 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 on the basis of their simple physical properties	- Use a variety of words to describe properties of materials/objects. - Sort different objects by material and property. - Describe the properties of different objects. - Explain the purpose of different objects. - Explain the benefits and suitability of using specific materials for different objects. - Name different materials of objects. - Carry out a scientific investigation including making predictions and recording data. - Analyse data and draw conclusions. - 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
	Understand movement, forces and magnets		Exploring magnets	
	Understand light and seeing			
	Investigate sound and hearing		- We hear with our ears – our hearing can help us to sense dangers - There are lots of different ways of making sounds. We describe sounds in different ways.	

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			Sounds seem louder the nearer you are to the source and fainter the further away you are from it.	
	Understand electrical circuits			- Demonstrate their understanding that many everyday appliances require electricity and to group appliances into categories. - Electricity can be dangerous and that appliances must be used safely. Understand that some appliances are less dangerous than others - Make a complete circuit using batteries, bulbs and wires and to make the bulb/buzzer work - Know that circuits will not work if there is no battery present or there is a break in the circuit. - To predict and investigate whether circuits will work from the drawings provided.
	Understand the Earth's movement in space			

YEAR 1 – seasonal change

National curriculum programme of study