

Science



Intent statement—

Children explore the world around them and expand on their natural curiosity through asking scientific questions and using observation and simple tests to find answers. Where possible science is taught through themes and the science topics are all relevant to the world around the child, therefore being tangible and meaningful to their experiences. Children learn how to plan simple investigations and how to interpret collected data to answer science questions.

Focus	Brave Explorer – Skill/attribute
Independence	Evaluates what has been learnt and compares approaches with others. Becomes more self-directed by working independently or with a group.
Imagination	Use and apply what they know to solve problems. Poses questions that do not have straightforward answers and seeks out problems to solve and challenge the routine method. Experiments with different modes of thinking.
Resilience	Works with peers to reach agreements and begins to manage disagreements when working in groups. Sees opportunities in mistakes and failures when asking scientific questions and undergoing investigations.
Teamwork	Ready to work in groups/teams Shares ideas willingly and views these as opportunities to expand their understanding. Shows that he/she can work in different roles in a group and take responsibility for appropriate tasks.

Working Scientifically	Exciting Earth	Living Things
Observe closely, using simple equipment Perform simple tests Identify and classify Use observations and ideas to suggest answers to questions Gather and record data to help in answering questions.	<u>Everyday Materials</u> Learn about a variety of different materials and their properties and everyday uses.	<u>Plants</u> Identify a variety of common wild and garden plant and describe how they grow. Learn about what a plant needs to grow and describe the basic structure of common flowering plants.
	<u>Seasonal Changes</u> Discover about the different seasons and observe changes across the four seasons and the associated weather changes.	<u>Animals, including humans</u> Identify and name variety of common animals and describe the basic needs of animals for survival. Learn about humans and the different parts of our bodies and how they grow and sense their surrounding. Describe the importance for humans of looking after our bodies/
		<u>Living things and their habitats</u> Know what makes something 'alive'. Describe how habitats are different for different plants and animals. Identify and name a variety of plants and animals in their habitats, including micro-habitats Describe simple food chains.

Subject and Intent statement (no more than 100 words)

Children gain a strong understanding of the world around them and become independent thinkers who through scientific enquiry ask questions and seek answers by planning observations and investigations, gathering and analysing data to form scientific conclusions. Natural child curiosity, respect for the environment and living organisms around us and the ability to critically evaluate evidence will be developed over the key stages. Themes within science topics are revisited and developed with the children building on prior knowledge and developing scientific enquiry skills as well as specialist vocabulary.



Working Scientifically	Exciting Earth	Living Things
Lower Key Stage 2 Ask relevant questions and use different types of scientific enquiries to answer them Set up simple practical tests Make systematic and careful observations Gather record, classify and present data Record and report on findings from enquiries Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions Identify differences, similarities or changes related to simple scientific ideas and processes Use scientific evidence to answer questions or to support their findings. Upper Key Stage 2 Plan different types of scientific enquiries to answer questions Take measurements, using a range of scientific equipment Record data and results Use test results to make predictions to set up further comparative and fair tests Report and present findings from enquiries Identify scientific evidence that has been used to support or refute ideas or arguments.	<u>Matter and materials</u> <u>Rocks</u> Compare and group together different kinds of rocks and describe how fossils are formed <u>States of matter/ Properties and changes of materials</u> Observe that some materials change state Compare and group together everyday materials on the basis of their properties and give reasons for particular uses of materials Decide how mixtures might be separated, Demonstrate that dissolving, mixing and changes of state are reversible changes <u>Energy and Forces</u> <u>Light</u> Learn about light, how we see and notice how light reflects and how shadows are formed. <u>Forces and magnets</u> Compare how things move on different surfaces and about how different forces act, including gravity, air resistance, water resistance and friction. Observe how magnets attract or repel each other and attract some materials and not others. <u>Sound</u> Identify how sounds are made and find patterns between the pitch and volume of a sound <u>Electricity</u> Identify common appliances that run on electricity Construct a simple series electrical circuits <u>Earth and Space</u> Describe the Sun, Earth and Moon and describe the movement of the Earth other planets and the moon. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	<u>Plants</u> 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 <u>Living things and their habitats</u> Describe how living things are grouped and classified and use classification keys to help group, identify and name Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird <u>Evolution and inheritance</u> Recognise that living things have changed over time (evolution) and that fossils provide information about living things that inhabited the Earth millions of years ago Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. <u>Animals, including humans</u> Identify that animals, including humans, need the right nutrition and the impact of diet exercise drugs and lifestyle on how human bodies function, Describe skeletal, (including teeth), digestive and circulatory systems in humans. Describe the changes as humans develop to old age.