Eldersfield Lawn CE Primary School
Science

INTENT

At Eldersfield Lawn CE Primary School, we aim to make science real! We believe it is important to allow all children to reach their full potential and prepare them to be the employees of the future ready to take on the challenge of new roles that do not yet exist. At Eldersfield Lawn CE Primary School, we seek to extend children's natural curiosity and eagerness to ask questions about the world, enabling them to develop and evaluate explanations through experimental evidence and modelling. Team work, independence and inventiveness are embedded in our science learning and are key attributes for this generation's future scientists. We aim to provide opportunities to ensure pupils acquire knowledge which they can retain in the long-term, whilst ensuring that all pupils thrive with the practical nature of scientific experimentation.

IMPLEMENT

At Eldersfield Lawn, we cover the requirements of the EYFS Framework and National Curriculum by structuring our science teaching through progression and build on children's previous knowledge and skills. Children are provided with the opportunities to enhance their understanding and to make their scientific learning relevant and real. Experimental techniques are developed throughout the school with a progression framework of what is expected in each year group, with reference to 'Working Scientifically' skills from the National Curriculum.

From Reception, we promote the children's abilities to explore the world around them by asking and answering questions, as well as using all their senses to develop understanding of how things work in the world and in their own bodies. In Class 2 pupils develop their scientific skills through first-hand experiences where they will make observations using simple equipment and perform simple tests. They will use their understanding of similarities and differences to begin to identify, classify and compare, and start to record and communicate their independent observations in numerous different ways. We build on the acquisition of language and using scientific vocabulary to describe their observations. As pupils move into Class 3, they will continue to explore, talk about, test and develop their ideas about living things and familiar environments through first-hand experiences and more systematic and careful observation. Pupils will be encouraged to ask more relevant questions and consider which types of scientific enquiry are most likely to be effective methods in answering them. Pupils will recognise when a fair test is necessary and help decide how to set up practical tests, teaching them to work scientifically. Pupils will develop their ability to record and communicate their results through drawing simple conclusions and use a wider range of scientific language. As pupils move into upper Key Stage Two, they will begin to select the most appropriate ways to answer science questions using different types of science enquiry. When carrying out tests, pupils will be taught to control variables, develop their accuracy and precision in taking measurements and record their data and results in more complex ways. This helps them to prepare for Key Stage 3 where they will apply their scientific knowledge and conceptual understanding to biology, chemistry and physics. We prepare pupils for encountering more abstract ideas, begin to understand and predict how the world operates and recognise that scientific ideas change and develop over time. This will help to support pupils in understanding the uses and implications of science, today and for the future. SEND children are encouraged to explore and investigate practically and usually work in mixed ability groups. Their understanding is sometimes recorded using alternative forms, such as through drawings, photographs and discussion if this is appropriate to their needs. The science curriculum at Eldersfield Lawn is tightly encompassed and linked to an adopted STEM approach, where Technology, Engineering and Maths are sometimes woven through Science. This approach allows us to involve pupils in their learning at a much more independent and practical level and helps to promote the use and understanding of these pivotal subjects into our ever-changing world. The hand-on approach adopted through STEM gives our pupils the encouragement for interest in these real-world themes to develop their key skills which are crucial for their future careers.

IMPACT

The science curriculum at Eldersfield Lawn links to other STEM approaches which allows pupils to be involved in their learning at a much more independent and practical, hands-on level. It promotes the use and understanding of other subjects linked to our ever-changing world which encourages interest to develop crucial key skills for their future careers. Children, from SEND to high attainers, have developed a love of science and an eagerness to observe and question the world. Our pupils have learnt to communicate using appropriate scientific language. As they progress through the school they can use scientific investigations to learn about our world and increasingly use graphs and tables to show their results. They can make conclusions and discuss ways in which their experiments could be improved. Teamwork has been fostered by performing experiments in groups and increasingly they have been encouraged to formulate and carry out their own investigations. As well as enjoying the resources of our school site – a magnificent wildlife and forest school area - we are fortunate to be able to offer an exciting range of science themed visits throughout the year to further inspire our pupils to be enthused and excited by their work. We are proud that so many pupils continue to excel in this subject at secondary school.

Eldersfield Lawn CE Primary School
Science End Points

RELEVANCE	PUPILS ARE ENABLED TO…
Stimulates and excites curiosity about phenomena and events in the world around.	Enquire, record and report, developing and evaluating explanations through observations, research, experiments and investigations.

EARLY LEARNING GOALS	Y1 END POINTS
C&L – Listening, Attention and Understanding • Make comments about what they have heard and ask questions to clarify their understanding. *PSE – Managing Self* • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. *UTW – The Natural World* • Explore the natural world around them, making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	• Identify and name a variety of common plants, including garden plants, wild plants and trees and those classified as deciduous and evergreen. • Identify and describe basic structure of variety of common flowering plants, (roots, stem/trunk, leaves and flowers). • Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates. • 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 (birds, fish, amphibians, reptiles, mammals and invertebrates, 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. • 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. • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies.

Y2 END POINTS	Y3 END POINTS
• 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. • Notice that animals, including humans, have offspring which grow into adults. • Investigate 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. • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. • Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock, and paper/cardboard for particular uses. • Explore and compare the differences between things that are living, that are dead and 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 animals, using the idea of a simple food chain, and identify and name different sources of food.	• Identify and describe the functions of different parts of flowering plants: roots, stem, 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 role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. • Identify that animals, including humans, need the right types and amounts of nutrition, that they cannot make their own food and they get nutrition from what they eat. • Identify that humans and some animals have skeletons and muscles for support, protection and movement • Compare and group together different kinds of rocks on the basis of their simple, physical properties. • Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock. • Recognise that soils are made from rocks and organic matter. • Recognise that they 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 their 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 size of shadows change. • 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.

Y4 END POINTS	Y5 END POINTS

• Construct and interpret a variety of food chains, identifying producers, predators and prey. • 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. • Recognise that living things can be grouped in a variety of ways. • Explore and use classification keys. • Recognise that environments can change and that this can sometimes pose dangers to specific habitats. • 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 the temperature at which this happens in degrees Celsius (°C), building on their teaching in mathematics. • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. • 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 sound volume and the strength of the vibrations that produced it. • Recognise that sounds get fainter as the distance from the sound source increases. • 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. • 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.	• Describe the changes as humans develop to old age. • 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. • Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. • Identify the effect of drag forces, such as air resistance, water resistance and friction that act between moving surfaces. • Understand that some mechanisms including levers, pulleys and gears, allow a smaller force to have a greater effect. • Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, conductivity (electrical and thermal), and response to magnets. • Understand how 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. • 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, oxidisation and the action of acid on bicarbonate of soda. • 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.

Y6 END POINTS	
• Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. • Recognise the importance of diet, exercise, drugs and lifestyle on the way the human body functions. Describe the ways in which nutrients and water are transported within animals, including humans. • Describe how living things are classified into broad groups according to common observable characteristics. • Give reasons for classifying plants and animals based on specific characteristics. • Understand 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 give out or reflect light into the eyes. • Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. • 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 function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. • Use recognised symbols when representing a simple circuit in a diagram. • Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. • Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. • Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Relate knowledge of plants to studies of all living things.	

Eldersfield Lawn CE Primary School

Working Scientifically End Points

RELEVANCE	PUPILS ARE ENABLED TO…
Stimulates and excites curiosity about phenomena and events in the world around.	Enquire, record and report, developing and evaluating explanations through experimental evidence.

EYFS END POINTS	Y2 END POINTS
• They answer 'how' and 'why' questions about their experiences and in response to stories or events. • They develop their own narratives and explanations by connecting ideas or events. • Children know about similarities and differences in relation to places, objects, materials and living things. • They make observations of animals and plants and explain why some things occur, and talk about changes.	• Ask simple questions. • Observe closely, using simple equipment. Perform simple tests. • Use observations and ideas to suggest answers to questions. • Gather and record data.
Y4 END POINTS	**Y6 END POINTS**
• Ask relevant questions. • Set up simple, practical enquiries and comparative and fair tests. • Make accurate measurements using standard units, using a range of equipment. • Gather, record, classify and present data in a variety of ways. • Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables. • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. • Use results to draw simple conclusions.	• Plan enquiries, including recognising and controlling variables where necessary. • Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. • Take measurements, using a range of scientific equipment, with increasing accuracy and precision. • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models. • Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions.

Eldersfield Lawn Science Summary Coverage Map 2025-2026

EYFS			
	Autumn	**Spring**	**Summer**
Reception	**Understanding the World, Personal, Social and Emotional development, Communication and Language, Listening, Attention and Understanding and Managing Self.**		
KS1			
	Autumn	**Spring**	**Summer**
Year 1 and 2	**Identifying Animals** **Everyday Materials**	**Super Scientists** **Growing Plants**	**Naming Plants** **Seasonal Change**
LKS2			
	Autumn	**Spring**	**Summer**
Year 3 and 4	**How Plants Grow** **Rocks, Fossils and Soils**	**Light and Shadow** **Health and Movement**	**Forces and Magnets**
UKS2			
	Autumn	**Spring**	**Summer**
Year 5 and 6	**Life Cycles** **Seeing Light**	**Properties and Changes of Materials** **Forces**	**Changes and Reproduction**

Eldersfield Lawn Science Summary Coverage Map 2024-2025

EYFS			
	Autumn	**Spring**	**Summer**
Reception	Understanding the World, Personal, Social and Emotional development, Communication and Language, Listening, Attention and Understanding and Managing Self.		
KS1			
	Autumn	**Spring**	**Summer**
Year 1 and 2	My Body Staying Healthy	Exploring Everyday Materials Living in Habitats	Identifying Plants Growth and Survival
LKS2			
	Autumn	**Spring**	**Summer**
Year 3 and 4	Living in Environments Eating and Digestion	States of Matter Changing Sound	Circuits and Conductors
UKS2			
	Autumn	**Spring**	**Summer**
Year 5 and 6	Changes and Reproduction Evolution and Inheritance	Earth and Space Forces	Healthy Bodies