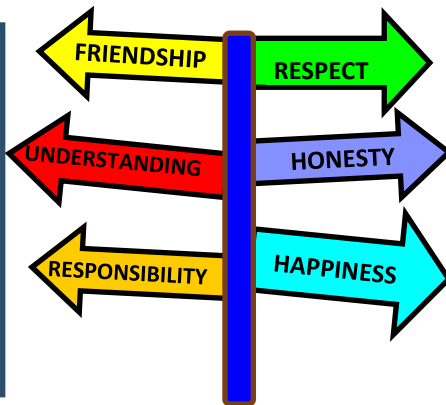




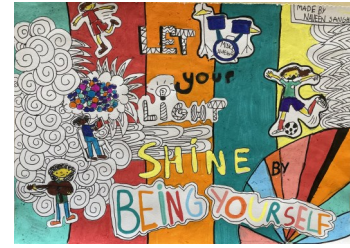
ACCESS FOR ALL CHILDREN
All children will be able to access the Science curriculum through differentiated activities in each lesson. Children's science knowledge and understanding can be presented in different ways. Scaffolds, writing frames and appropriate levels of support and challenge will be used when recording is done in the written form to ensure that pupils learn effectively, continuously building their Science knowledge and skills.



LET YOUR LIGHT SHINE
Matthew 5:16
Science
Learning Journey



PEDAGOGY
The children's science knowledge and understanding is developed through engaging lessons which use visual representations, models and investigations to teach different concepts. Whole-class teaching takes places both indoors and outdoors, making valuable use of different areas of the school such as the Forest School Area.



SUBJECT OVERVIEW
In the EYFS, children develop their scientific skills through first-hand experiences. They will continue to develop these skills in KS1 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. They will continue to build on their ability to ask questions and begin to recognise that their questions can be answered in a variety of different ways. As pupils move through KS1 they will begin to record and communicate their observations and results in various ways. As pupils move into lower key stage two 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. Pupils will develop their ability to record and communicate their results through drawing simple conclusions using some scientific language to talk about and write about their findings and begin to make predictions. 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. Pupils will use their results to identify when further tests might be needed and use relevant scientific language when communicating and justifying their ideas. Pupils will develop a wider range of scientific ideas through analysing functions, relationships and interactions more systematically. Throughout upper key stage two, pupils will develop their scientific knowledge and conceptual understanding in readiness for key stage three where they will apply this to biology, chemistry and physics. Pupils will encounter 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. As pupils move into key stage three they will build on their understanding of scientific attitudes, their experimental skills and ability to investigate, take measurements, analyse and evaluate. Following an evaluation of the Science learning journey, the children in Year 3 and 4 will follow a slightly different order of units this summer to ensure that the prerequisite knowledge in in place for the 2023-2024 academic year.

KEY Living things and their habitats : Animals including humans, plants, evolution & inheritance Materials: Uses of Everyday Materials , Rocks, Properties and Changes of Materials , States of Matter Our World & beyond: Seasonal Change, Light, Sound, Forces, Earth & Space, Electricity, EYFS CLASS Y1/YR CLASS Year A and Year B

Y7	The children learn about the changes that humans experience as they develop to old age. Puberty is taught sensitively alongside PSHE lessons in the Autumn Term. Progressing on from learning in Year 3/4, the children learn about the importance of diet, exercise and lifestyle in the way that bodies function. They learn about the three main parts of the circulatory system and the job of the heart. They also learn about what blood is comprised of and how it is transported around the body.		Building on Year 3/4, children represent circuits using symbols in a diagram, developing their understanding of what electricity is and how it is measured. Completing the unit on Forces, children will learn about levers, pulleys and gears.		Children learn about light, how we see, shadows, reflection and refraction. They learn how light travels and how this enables us to see objects.		In this unit the children will learn about types of forces such as gravity, friction, water resistance and air resistance. They will learn about Isaac Newton and his discoveries about gravity and work collaboratively to investigate air resistance.		Children learn about Earth and it's place in our solar system. They will learn about the Earth's rotation and the movement of the moon relative to Earth.					
	Animals, including humans		Forces		Electricity		Light		Forces		Earth and Space			
	MAGNIFICENT MAYA		FOR KING AND COUNTRY WW2		INTO THE UNKNOWN (SPACE)		GOLDEN GREEKS		OUT OF AFRICA		Y5/6			
Y3/4	Living things and their habitats		Properties and Changes of Materials		Living things and their habitats		Evolution and Inheritance		Y5/6 ENRICHMENT		YEAR B			
	Children learn about the classification of living things, including micro-organisms. They build on their work in Y3/4 by sorting animals based on their similarities and differences. They extend their learning to find out about the standard system of classification.		Children learn about different materials, their uses and their properties, as well as dissolving, separating mixtures and irreversible changes. They will sort and classify and explore the properties of materials to find the most suitable material for different purposes.		Building on work from Y3/4, the children learn about the process of reproduction and the life cycles of plants, mammals, amphibians, insects and birds. Children learn about variation and adaptation when learning about evolution and inheritance. They also learn about the theory of evolution and scientific evidence to support this.		Children learn about common electrical appliances and how to construct simple series circuits with reference to conductors and insulators.		Recycling Plant Trip		YEAR A			
	Children explore ways to identify, sort, group and classify living things. They learn about vertebrates and invertebrates, and begin to use classification keys.		Children learn about light, reflections and shadows. They investigate reflective materials and learn about the sun's light.		Children learn about how vibrations cause sounds and how sounds travel, as well as how sounds can change pitch and loudness.		Children learn about forces, friction and magnetic attraction, carrying out different investigations throughout the unit.		Trip to National Space Centre					
Y3/4	Living things and their habitats		Light		Sound		Forces and Magnets		Electricity		Y1/2			
	RAINFORESTS		SCAVENGERS AND SETTLERS		ANCIENT EGYPTIANS		INVENTIONS		FOOD AND FARMING		YEAR B			
	ACTIVE PLANET		ANCIENT EGYPTIANS		FOOD AND FARMING		Y1/2 ENRICHMENT		YEAR A					
Y3/4	Rocks		States of Matter		Animals, including humans		Plants & Famous Scientists		Y1/2 ENRICHMENT		YEAR B			
	Children will discover the different types of rocks and how they are formed. They will compare and group these rocks and learn about fossils. Children will understand how soil is formed and then investigate the permeability of different types of soil		Children will learn about the differences between solids, liquids and gases, classifying objects and identifying their properties.		Progressing on from Year 1/2, the children learn about the nutrients that different types of food provide and learn about human and animal skeletons.		Children will explore the different organs of the digestive system in humans and the functions of teeth in humans and animals. Furthermore, they will learn more about herbivores, carnivores and omnivores in the context of teeth, digestion and food chains.		Building on learning in Year 1/2, the children recap the different parts of the plants and learn about the jobs they do and the importance of flowers. They carry out investigations into what plants need to grow well and predict what will happen in an exciting investigation into the transportation of water within plants. Children learn about famous scientists from the UK and across the world and the impact that these people have had.		Lincoln Castle		YEAR A	
	The children learn about a variety of habitats and the plants and animals that live there. They learn to tell the difference between things that are living, dead and things that have never been alive and apply this knowledge in a range of contexts. They make observations of a local habitat and the creatures that live there.		Children learn to identify and name everyday materials and explore their proprieties. They sort objects and carry out simple investigation. Progressing on from Y1 objectives to Y2, the children then learn about the uses of everyday materials and compare the suitability of these materials for different purposes.		The children will learn about classifying animals according to their group, and learn about the different diets animals eat. Children will then progress on to looking at young animals and comparing them to their adults, using the life cycle of several animals to look at how animals change as they grow up.		Y1/2 ENRICHMENT		YEAR A					
Y3/4	Living things and their habitats		Uses of Everyday Materials		Everyday materials		Animals, including humans (animals)		THE BIG FREEZE		THE STORIES PEOPLE TELL		Y1/2	
	LETS GO ON HOLIDAY		OUR WORLD		STRUCTURES ALL AROUND US		THE BIG FREEZE		THE STORIES PEOPLE TELL		Y1/2		YEAR B	
	FLOWERS AND INSECTS		THE THINGS PEOPLE DO		CASTLES		TRANSPORT		Y1/2		YEAR A			
Y3/4	Plants		Seasonal Change		Animals, including humans (humans)		Y1/2		Y1/2		Y1/2		YEAR B	
	Children begin by learning to name the basic parts of a plant, including seeds. They plant seeds and make observations of how they grow over time. They also identify, compare and classify different plants before learning what plants need to stay healthy and about the life cycle of a plant.		The children learn about the 4 seasons, looking for changes by exploring the signs of each season through nature and wildlife. They learn about different types of weather and how these can be measured.		Children learn about the parts of the human body and have the opportunity to explore the five senses through simple investigations. The children then progress onto looking at the human life cycle, drawing on their own observations and explore the importance of a healthy life style.		Y1/2		Y1/2		Y1/2		YEAR A	
	Y1/2		Y1/2		Y1/2		Y1/2		Y1/2		Y1/2			
Yr R	ALL ABOUT ME		LET'S CELEBRATE		PEOPLE IN OUR COMMUNITY		SCOTHERN & BEYOND		AMAZING ANIMALS		ALL AROUND THE WORLD		Yr R	
	Children understand the terms 'same' and 'different'.		Children explore and ask questions about the natural world around them when talking about seasonal change. Children will learn about nocturnal animals that hibernate in the winter.		Children know how to sort and group materials and resources and talk about how they are similar or different. Children will name familiar British birds.		Children talk about features of the environment they are in and learn about the different environments. Children to make observations about Spring plants and animals.		Children make observations about animals discussing similarities and differences, using language such as camouflage, predator etc. Children to investigate floating and sinking.		Children know some important processes and changes in the natural world, including states of matter and the weather. Children to compare different environments and investigate objects casting a shadow.		Yr R	
	Yr R		Yr R		Yr R		Yr R		Yr R		Yr R			