



Science Progression at St Mary's Catholic Primary

	AUTUMN		SPRING		SUMMER	
	Knowledge & Understanding	Working scientifically	Knowledge & Understanding	Working scientifically	Knowledge & Understanding	Working scientifically
YEAR 1	<p>Animals: identify, name, draw and label parts of the human body; identify their five senses.</p> <p>- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>Seasonal changes: -observe and record seasonal change</p>	<p>- explore the world around them</p> <p>-ask and answer questions</p> <p>- make predictions based on observations</p> <p>-begin to notice patterns and relationships</p>	<p>Materials: -identify and describe the physical of materials and their properties.</p> <p>-distinguish between objects and the materials they are made of.</p> <p>-investigate materials</p> <p>Investigate flight</p> <p>Seasons: -observe and record seasonal change and weather associated with seasons.</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p>	<p>- measure with simple equipment</p> <p>- begin to sort objects, materials and living things</p> <p>-ask simple questions</p> <p>Use simple equipment to observe</p> <p>- gather data, record and describe</p>	<p>Plants: identify and describe the basic structure of a flowering plant; describe what it needs to grow.</p> <p>-investigate plants including trees</p> <p>Seasons: -observe and record seasonal change and weather associated with seasons.</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p>	<p>- gather data</p> <p>- Organise data on graphs</p> <p>- draw pictures and describe observations</p>
	Explorers		Fruits, shoots and juicy fruits		The Big Smoke	
YEAR 2	<p>Animals and humans</p> <p>Notice that animals, including humans, have offspring which grow into adults</p> <p>- Find out about and describe the basic needs of animals,</p>	<p>-Choose ways to try to ask and answer questions</p> <p>-</p> <p>Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them with increasing confidence</p>	<p>Plants</p> <p>-Observe and describe how seeds and bulbs grow into mature plants</p> <p>- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p>	<p>Make own suggestions on how to collect data</p> <p>- Able to observe closely</p> <p>- Use simple measurements and equipment (for example, hand lenses, egg timers) to gather data w</p> <p>- Use simple features to compare objects, materials</p>	<p>Use of everyday materials</p> <p>-Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p>	<p>-Gather and record data</p> <p>- Draw labelled pictures of an experiment</p> <p>- Make a block diagram, simple pictogram or simple table to show results</p> <p>-Begin to use simple scientific language in recording their observations</p>

	<p>including humans, for survival (water, food and air)</p> <ul style="list-style-type: none"> - Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene - Explore and compare the differences between things that are living, dead, and things that have never been alive <p>Habitats</p> <ul style="list-style-type: none"> - 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 - 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 name a variety of plants and animals in their habitat, including micro-habitats 			<p>and living things and, with help, decide how to sort and group them with increasing confidence</p>	<ul style="list-style-type: none"> - Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching 	<ul style="list-style-type: none"> - Take some guided planning decisions - Recognise when simple test is unfair - Make simple prediction if appropriate (based on observations) - Talk about what they have done in their investigation <p>Begin to notice patterns and relationships</p>
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	Rainforests		From Stone Age to Iron Age		Ancient Egypt	
YEAR 3	Plants - Investigate the functions of different parts of plants. - Investigate what plants need to live and grow. - Investigate the life cycle of plants - Investigate how water is transported within plants. Forces - investigate different types of forces - Investigate how magnets attract and repel each other	-Ask relevant questions -set up practical enquiries and fair tests -make careful observations using standard units and a range of tools -record findings using scientific language -record findings using labelled diagrams, bar charts and tables -Use scientific evidence to answer questions and support findings.	Rocks - Compare rocks based on their properties - Recognise that soil is made from rocks and organic matter. - Understand what fossils are and how they are formed. Animals and humans - Understand that humans and other animals have skeletons and muscles. - Learn about how humans and animals require nutrition. - Understand how different foods benefit the body.	-Identify differences, similarities and explain processes. -record findings using labelled diagrams, bar charts and tables	Light - Recognise that light is needed in order to see. - Recognise that light can be reflected from surfaces and blocked. - Identify patterns in changing shadows. - Recognise the dangers of the sun's rays. Forces and magnets - Compare how things move across surfaces. -recognise that magnetic forces act from a distance. -Compare everyday materials by their magnetism.	-Ask relevant questions -Use results to draw conclusions- make predictions and suggest improvements- raise further questions -set up practical enquiries and fair tests make careful observations using standard units and a range of tools
	The Celts and the Romans		Inventors		Africa	
YEAR 4	Animals and humans -Construct and interpret the food chain -identify producer-predator-prey -Describe functions of the basic parts of the human digestive system -Identify types of teeth in humans States of matter -Compare and group materials together Identify and explain solids, liquids and gases -Observe changes of state and explain the effects of temperature; heating and cooling -Explain the water cycle as well as the process of condensation and	-Ask relevant questions -set up practical enquiries and fair tests -make careful observations using standard units and a range of tools -record findings using scientific language -record findings using labelled diagrams, bar charts and tables -Use scientific evidence to answer questions and support findings.	Electricity -Identify appliances that use electricity. - Identify the parts of a circuit and construct a circuit -explain the effect of a lamp and switch on a circuit - recognise materials that conduct electricity and insulators	-Identify differences, similarities and explain processes. -record findings using labelled diagrams, bar charts and tables -record findings using scientific language -record findings using labelled diagrams, bar charts and tables	Sound -Identify how sound is made and explain how vibrations create sound -explain that vibrations travel through the air to the ear. - understand what effects volume and pitch. -explain that sound grows fainter as distance from the source increases.	-Ask relevant questions -Use results to draw conclusions- make predictions and suggest improvements- raise further questions -set up practical enquiries and fair tests make careful observations using standard units and a range of tools -record findings using labelled diagrams, bar charts and tables

	evaporation; associate evaporation with temperature.					
	Invasions		The Final Frontier		The Mighty Medway	
YEAR 5	Properties and changes in materials <ul style="list-style-type: none"> - Describe and group together materials based on their properties. - Explain why some materials dissolve and how to recover a substance from a solution. - Use scientific knowledge to explain how mixtures can be separated - Give reasons for the practical use of different materials - Demonstrate and explain how some changes such as mixing and dissolving can be reversible - Explain why some changes are not reversible 	<ul style="list-style-type: none"> - Plan different types of scientific enquiries; recognise and control variables - Use accurate measurements, including repeated readings over time. - Record data and results with increasing complexity use a range of tools to present data; keys, graphs, tables and line/scatter graphs. - Make predictions based on results and use results to inform further investigations. 	Earth and Space <ul style="list-style-type: none"> - Describe the movement of the earth and other planets relative to the sun. - Describe the movement of the moon relative to the earth. - Describe the Sun, moon and earth as spherical bodies. - Explain day and night by the earth's rotation and the apparent movement of the sun across the sky. 	<ul style="list-style-type: none"> - Explain causal relationships and conclusions. - Identify scientific results that have been used to support or refute ideas. - Record data and results with increasing complexity use a range of tools to present data; keys, graphs, tables and line/scatter graphs. 	Animals and humans <ul style="list-style-type: none"> - describe changes as humans develop to old age - Explain the differences in the life cycle of mammals, insects and birds. - Describe the life process of reproduction in plants and animals. Forces <ul style="list-style-type: none"> - Explain the force of gravity. Identify the effects of air and water resistance. - Explain friction Explain how smaller forces can achieve greater force with the use of levers and pulleys 	<ul style="list-style-type: none"> - Use accurate measurements, including repeated readings over time. - Record data and results with increasing complexity use a range of tools to present data; keys, graphs, tables and line/scatter graphs. - Make predictions based on results and use results to inform further investigations.
	Quantum Leap		All Systems Go		Change	
YEAR 6	Light <ul style="list-style-type: none"> - That light travels in a straight line. - Objects can be seen because of how light travels and reflects light into the eye. - Explain that we can see because light travels from a source to our eyes. - Explain how light travel causes shadows to be 	<ul style="list-style-type: none"> - Plan different types of scientific enquiries; recognise and control variables - Use accurate measurements, including repeated readings over time. - Record data and results with increasing complexity use a range of tools to present data; keys, graphs, tables and line/scatter graphs. 	Evolution & inheritance <ul style="list-style-type: none"> - Recognise that living things have changed over time and that fossils provide information about life that was on earth millions of years ago. - Recognise that living things produce offspring that is not identical to parents. - Explain how plants and animals are adapted to 	<ul style="list-style-type: none"> - Explain causal relationships and conclusions. Identify scientific results that have been used to support or refute ideas. 	Evolution & inheritance <ul style="list-style-type: none"> - Recognise that living things produce offspring that is not identical to parents. - Explain how plants and animals are adapted to suit their environment and that adaption may lead to evolution. 	<ul style="list-style-type: none"> - Use accurate measurements, including repeated readings over time. - Record data and results with increasing complexity use a range of tools to present data; keys, graphs, tables and line/scatter graphs. - Make predictions based on results and use results to inform further investigations.

	<p>the same shape as an object.</p> <p>Electricity</p> <ul style="list-style-type: none"> - Explain that the brightness of a bulb or the volume of a buzzer is effected by the voltage of cells used in the circuit. - Compare and give reasons for variations in how components function. - recognise and use symbols used in circuit diagrams. 	<ul style="list-style-type: none"> - Make predictions based on results and use results to inform further investigations. 	<p>suit their environment and that adaption may lead to evolution.</p> <p>Animals and humans</p> <ul style="list-style-type: none"> - Identify main parts of the circulatory system - the function of the blood, blood vessels and the heart. -Recognise the impact of lifestyle exercise and drugs on the human body. -Describe how water and nutrients are transported in the bodies of humans and animals. 			
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