

Science

Science 2022-2023

	Michaelmas Term		Lent Term		Trinity Term	
Reception	<p>Ourselves These topics may change according to the needs and interests of the students</p> <p>Ourselves Colour and light Ourselves - families- similar/different How things grow- Harvest Bodies/ bones- Funny bones Healthy Eating</p>	<p>Festivals- How things grow- Harvest</p> <p>Floating/ sinking Farm animals Houses and Homes Clothes for different weather</p>	<p>These topics may change according to the needs and interests of the boys and girls</p> <p>Weather Seasons Animals Ourselves/feelings</p>	<p>Transport - how things move (Steam train/electric train) Stars/ Constellations Materials</p>	<p>These topics may change according to the needs and interests of the boys</p> <p>Houses and Homes Flowers/ Plants growing Recycling/ environment</p>	<p>Materials Colours/ mixing What we need to stay healthy - diet/ exercise etc</p>
Prep One	<p>Materials - identify objects made from wood, metal and plastic.</p>	<p>Materials and Season to be looked at for two lessons in this term</p>	<p>Growing in plants Seasons. To discover what a seed is and conditions that will allow them to grow. To</p>	<p>Growing in animals- How bodies change throughout our lives</p>	<p>Senses Identify and label parts of a human body. Discover by investigation</p>	<p>Seasons- describe and compare weather associated with the</p>

	<ul style="list-style-type: none"> • sort objects into wooden, metal and plastic groups. identify different types of paper. To recognise that most objects are made from more than one material sort materials according to how they look and feel To investigate the stretchiness and flexibility of selected materials Investigate absorbency, transparency <p>Seasons- I name the four seasons of the year.</p> <ul style="list-style-type: none"> • describe how the 		<p>discover what germination is and the factors affecting it.</p> <p>identify things in the natural world that change each season.</p> <ul style="list-style-type: none"> • Use my senses to make observations. • collect evidence to show how the seasons change 	<p>Seasons- explain in which season certain evidence might be found</p>	<p>all human senses</p> <p>Describe how our senses help us to find out about the world</p> <p>Seasons- describe the weather and how it varies at different seasons of the year</p>	<p>seasons</p> <p>Then recap all facts and vocabulary learnt over the year when looking at seasons.</p>
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	<p>changes I notice each season look and feel.</p> <ul style="list-style-type: none"> • suggest which clothing to wear in each season. • explain why clothing made of certain materials is suitable for a particular season. 					
Prep Two	Animals including humans,	Animals including humans,	Uses of everyday materials	Uses of materials in space	Plants, and their Local Environment	Local environments/ habitats
Prep Three	<p>Forces-Magnets and Springs To discover the three main simple forces of push, pull and twist (which is really a combination of a push and pull)</p> <p>Investigate most forces need contact but one does not.</p>	<p>Nutrition- What animals need to stay healthy- What a healthy diet is.</p> <p>Learn what the main food groups are and their functions.</p> <p>Discover the diet of other animals</p>	<p>Light and Shadows</p> <p>What is light, what happens with the absence of light.</p> <p>What is reflection and investigate reflective surfaces</p> <p>How are shadows created.</p>	<p>Rocks and Soils</p> <p>Where are rocks found and what are their uses.</p> <p>What are the three types of rocks and how are they</p>	<p>Seeds- what they are, where are they found, what special features do they have, how they are dispersed, why they are dispersed.</p>	<p>Plants- what is pollination, what is fertilisation.</p>

	<p>To then focus the forces created by magnets and learn what a magnet is and how it works. Show a magnetic field using iron filing experiment.</p> <p>What attraction and repulsion is?</p> <p>Magnets have a N and S pole.</p>		<p>Investigate shadows using shadow puppets to alter their size.</p> <p>How light from the Sun can be dangerous, so learn to protect your eyes and body from this.</p>	<p>are identified.</p> <p>Discover the distinguished features of each rock type.</p> <p>Soils -what are the composed of and discover the four main types of soil.</p> <p>What is the best soil used to grow healthy plants</p>		
<p>Prep Four</p>	<p>Animals - teeth</p> <p>Identify the different teeth types and their functions.</p>	<p>Animal digestion.</p> <p>Discover the different parts of the digestive system.</p> <p>Through experimental</p>	<p>States of Matter</p> <p>Discover through using the three mediums of water what the three states of matter are.</p> <p>Discover through investigative work the</p>	<p>Sound</p> <p>Discover what a sound is and how they are all created by vibrations.</p>	<p>Habitats-</p> <p>Living things can be grouped.</p> <p>Discover how then look at</p>	<p>Electricity</p> <p>What electricity it is and how it is transported.</p> <p>Learn the two main sources</p>

	<p>How to have healthy teeth and investigate to discover the drinks that damage teeth</p> <p>Discover the history of toothpaste.</p> <p>Investigate which brand of toothpaste is the most effective at removing dirt/marks.</p> <p>Design a poster to educate children how to look after their teeth.</p> <p>Learn the teeth carnivore, herbivores and omnivores have and why.</p>	<p>means discover the function of each part of the digestive system</p>	<p>properties of the three states.</p> <p>Learn how each state exists at room temperature in relation to arrangement of molecules and amount of energy. Discover how the states can be changed.</p> <p>Focus on evaporation and condensation to link this to the water cycle.</p>	<p>Discover how sound travels through solids, liquids and gases.</p> <p>Learn the structure of the ear and function of each part.</p>	<p>simple classification.</p> <p>Decide what a habitat is and what it provides.</p> <p>Recognise that different living things live in different environments due how they have adapted to their surroundings.</p> <p>When there are environmental changes this can pose dangers for some species.</p> <p>Specifically look at the habitats of</p>	<p>of electricity are from batteries and mains</p> <p>Recognise universal symbols and how to draw a scientific circuit using them.</p> <p>Recognise a series circuit and predict of a circuit will work or not.</p>
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Prep Five	<p>Properties of materials Discover the main properties of material- hardness, transparency, flexibility, ability to stretch- linked to Hook's law, magnetism, ability to conduct heat and electricity. Understand the importance of discovering the properties of materials before deciding on a material for a particular job.</p>	<p>solubility - Understand what dissolving is and the factors that affect it. Then how to separate mixtures by filtering, sieving or evaporation. Reactions- understand what a physical and chemical change is and recognise examples of both.</p>	<p>Forces What a force is and then investigate the main forces around us.</p>	<p>Forces How they have been used throughout the ages to make simple machines- gears, levers and pulleys. How they work and the science behind them.</p>	<p>Earth, Moon and space Discover where Earth, Sun and Moon lie in relation to each other and compare their sizes. Discover what planets make up the solar system. Discover the order, composition and size of each planet. Compare gravity on all planets. How a day, lunar month, year</p>	<p>Life Cycles Discover that all living things have a life cycle. Discover the life cycles of mammals, reptiles, amphibians, birds and fish then compare them.</p>

					and seasons ate created. Outside the solar system, deep space, star constellations and research the life of an astronaut.	
Prep Six	The human body The heart and circulatory system And fitness. Graph drawing and analysis will be incorporated into this module.	The human digestive system, respiratory system The skeletal system	Evolution Incorporating- Characteristics and where they come from(genetics) Variation- genetic or adapted/environmental mutations leading to evolution Fossils and how they are formed, to provide proof of evolution. Mary Anning - the most famous palaeontologist	Light Discover what light and darkness are. How light travels. Discover what ta source and reflector are. Recognise and learn to draw light diagrams using a ray	Electricity- Changing Circuits. Recap universal symbols and what a series circuit it. Learn how to draw and predict if a circuit will work. Discover what parallel circuit	The Microscope, Cells and their Structure, Enquiry in environmental and technological contexts Independent Investigations. The brain and how it works on a basis level.

				box. Discover what shadows are and investigate how the sizes can be altered	are and their uses Revision of KS2	
	<p>Throughout the upper Prep pupils will now be encouraged to understand science investigations in terms of variables and not think of them as FAIR TESTS but working fairly to keep in line with changes to the science GCSE terminology. In Prep Six there will be an emphasis put on learning how to collect data, construct several types of graphs and analyse graphs to explain data, how to draw scientific diagrams, write a detailed scientific conclusion and evaluation for all experimental work.</p>					
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