

Holymead Primary School

Science Overview

Units																			
		Reception (YR)		Year 1		Year 2		Year 3		Year 4		Year 5		Year 6					
Type of Enquiry		Observing		Identifying and Classifying		Testing		Researching using secondary sources		Observing over time		Identifying, classifying and grouping		Pattern Seeking		Comparative and fair testing		Researching using secondary sources	
Working Scientifically Skills	Plan	Choose the resources they need for their chosen activities and say when they do or don't need help			Ask simple questions and recognising that they can be answered in different ways.				Ask relevant questions and using different types of scientific enquiries to answer them Set up simple practical enquiries, comparative and fair tests				Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary						
	Do	Know about similarities and differences in relation to places, objects, materials and living things Make observations of animals and plants Explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Select and use technology for particular purposes			Observe closely, using simple equipment Perform simple tests Identify and classify				Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, use a range of equipment, including thermometers and data loggers				Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate						
	Record	Represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories			Gather and record data to help in answering questions.				Gather, record, classify and present data in a variety of ways to help in answering questions Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables				Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs						

	Review	Talk about the features of their own immediate environment and how environments might vary from one another Explain why some things occur and talk about changes	Use their observations and ideas to suggest answers to questions	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions 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 straightforward scientific evidence to answer questions or to support their findings	Use test results to make predictions to set up further comparative and fair tests Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Identify scientific evidence that has been used to support or refute ideas		
Term 1	Our Body (inc. healthy eating)	Materials (name, group & describe) Ole Kirk Christiansen (founded Lego) Charles Macintosh (invented waterproof)	Living Things (living or dead & food chains) Dawood Qureshi (Marine Biologist who studies wildlife in the ocean)	Rocks (physical properties & fossils) Florence Bascom (Rocks acidity) William Smith (Geological Maps) Inge Lehmann (Discovery of Earth's Mantle)	Living Things and their Habitats (grouping, classification & environmental factors) Rachel Carson (Environmental pollution of the ocean) Jacques Cousteau (Marine Explorer) Sylvia Earle (Ocean discovery) Libby Hymans (Invertebrate and Vertebrate)	Forces (gravity, mechanisms, naming forces) Albert Einstein (Magnetism and gravitational pull) Isaac Newton (Gravity) Galileo	Animals including Humans (circulatory system, impact of lifestyle) Louis Pastuer (vaccination and pasteurisation) Marie Maynard Daly (understanding of diets) Rosalind Franklin (DNA discovery)
Term 2	Materials (reflective & waterproof)	Seasons (Autumn and Winter) (describe) Chester Greenwood (invented ear defenders) Jim Cantore (Meteorologist and storm tracker)	Animals (Including Humans) (how humans survive & live) Maria Sibylla Merian (life cycle of butterfly) Edward Jenner (medicine and vaccine) Florence Nightingale (Cleanliness of hospitals)	Animals (Including Humans) (skeletons, muscle & nutrition) Ibn Sina (Medicine) Wilhelm Rontgen (inventor of x-ray)	Electricity (Term 2-3) (circuits, conductors & insulators) Joseph Swan, Hertha Ayrton and Thomas Edison (Lightbulb) Lewis Latimer (Lightbulb) Science Day - Doorbells	Properties and Changes of Materials (comparing materials, reversible & irreversible changes) Stephanie Kwolek (Kevlar inventor) Becky Schroeder Jamie Garcia (Plastic)	Evolution and Inheritance (adaptation, inheriting characteristics) Mary Anning (Discovery of fossils) Charles Darwin and Alfred Russel Wallace (Evolution) Science Day - fossils

<p>Term 3</p>	<p>Space (light, shadows and dark) & Ice (solid, liquids, gases & melting) Space dome</p>	<p>Animals (Including Humans) (types of animals & human body parts and senses) Joan Beauchamp Practor (reptiles) Chris Packham (animal conservationist, wildlife photographer)</p>		<p>Plants (function of parts of plants and life cycle) Stephen Hales (Transpiration) Anna Atkins (Prints of plants – importance of scientific sketches) Science Day</p>		<p>Electricity (symbols, changing circuits) William Kamkwamba (invented windturbine) Andre-Marie Ampere (invented amps) Science Day</p>	<p>Light (how light travels) Thomas Edison (credited with light bulb) Joseph Swan (Filaments in tubes) Patricia Bath (Cataract surgery) Alhazen Lewis Lutimer Science Day - periscopes</p>
<p>Term 4</p>	<p>Animals (characteristics & habitats) Farm trip</p>	<p>Seasons (Spring) George James Symons (measures rainfall) Liam Dutton (weatherperson/ meteorologist) Science Day</p>	<p>Materials (suitability of materials) John Dunlop (Rubber and Tyres) Robert Gair (Cardboard carton) Charles Macintosh (invented waterproof)</p>	<p>Sound (vibrations, pitch & volume) Carl Gauss, Wilhelm Weber, Galileo and Alexander Bell Walter Lincoln Hawkins (invented plastic on phone lines) Science Day – Sound new 2022/23</p>		<p>Science</p>	<p>Living Things and their Habitats (classification) Carl Linnaeus (Linnaeus classification)</p>
<p>Term 5</p>	<p>Chicks (lifecycles inc. butterfly, chickens, frog as well as linking to other things that grow eg plants hatch chicks from eggs Plants growing beans</p>	<p>Plants (types of plants & basic structure) Beatrix Potter (observational Drawings)</p>	<p>Plants (what they need & how they grow) Jane Colden (Plant observations) Agnes Arber Science Day</p>	<p>Light (vision, reflections & shadows) Ibn al-Haytham (Linking light to 'seeing')</p>	<p>Animals (Including Humans) (digestive system, teeth & food chains) Pierre Fauchard (Father of modern dentistry) Lilian Lindsay (first female to study dentistry in UK) In-depth</p>	<p>Earth and Space (day/night, relationship of sun, moon & earth) Tiera Guinn Fletcher Mae Jemison (first female African in space) Aristarchus (discovers earth orbits sun) Galileo Galilei (observational astronomy father)</p>	

<p>Term 6</p>	<p>Minibeasts</p>	<p>Seasons (Summer) comparing seasons</p> <p>Science Day</p>	<p>Habitats (suitability of habitats) Ernest Shackleton (Antarctica exploration)</p> <p>Science Day</p>	<p>Forces and Magnets (repel & attract, movement)</p> <p>William Gilbert (Doctor who developed the theory of magnetism) Leonardo Da Vinci - search document for information (First person to plan and carry out tests on friction)</p> <p>Science Day</p>	<p>States of Matter (solids, liquids & gases and changes) Svante Arrhenius (identified CO2 was a greenhouse gas) Daniel Gabriel Fahrenheit(Temperature) Antoine Lavoisier (Naming chemical compounds)</p>	<p>Living things and their Habitats (life cycles & reproduction in animals & plants) David Attenborough (Naturalist) Jane Goddall (Animal behaviourist) Both longer studies) Linked to Dr. Paula Kahhumbu Mary Agnes Chase (Study of grasses in habitats)</p> <p>Science Day – We the Curious</p>	<p>Animals (Including Humans) (changes in humans) Jean Purdy, Patrick Steptoe and Robert Edwards (IVF, test tube babies) Elizabeth Blackwell (First women to graduate from medical school – Bristolian)</p>
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