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)	***Rocks*** (physical properties & fossils) Florence Bascom (Rocks acidity) William Smith (Geological Maps) Inge Lehmann (Discovery of Earth's Mantle) Mary Anning (fossil discovery)	***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	***Evolution and Inheritance*** (adaptation, inheriting characteristics) Mary Anning (Discovery of fossils) Charles Darwin and Alfred Russel Wallace (Evolution) Science Day - fossils
Term 2		***Materials*** (reflective & waterproof)	***Seasons (Autumn and Winter)*** (describe) Chester Greenwood (invented ear defenders)	***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) Science Day – Little Zoo	***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	***Properties and Changes of Materials*** (comparing materials, reversible & irreversible changes) Stephanie Kwolek (Kevlar inverntor) Becky Schroeder Jamie Garcia (Plastic)	***Animals including Humans*** (circulatory system, impact of lifestyle) Louis Pastuer (vaccination and pasteurisation) Marie Maynard Daly (understanding of diets) Rosalind Franklin (DNA discovery)

Term 3	***Space*** (light and dark) & ***Ice*** (solid, liquids, gases & melting) Space dome	***Animals (Including Humans)*** (types of animals & human body parts) Joan Beauchamp Practor (reptiles) Chris Packham (animal conservationist, wildlife photographer)		***Plants*** (function of parts of plants and life cycle) Stephen Hales (Transpiration) Anna Atkins (Prints of plants – importance of scientific sketches) Science Day	***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		***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
Term 4	***Animals*** (characteristics & habitats) Farm trip	***Seasons (Spring)*** George James Symons (measures rainfall) Liam Dutton (weatherperson/ meteorologist) Science Day	***Materials*** (suitability of materials) John Dunlop (Rubber and Tyres) Robert Gair (Cardboard carton) Charles Macintosh (invented waterproof)			***Electricity*** (symbols, changing circuits) William Kamkwamba (invented windmill) Andre-Marie Ampere (invented amps) Science Day Science	***Living Things and their Habitats*** (classification) Carl Linnaeus (Linnaeus classification)
Term 5	***Chicks*** (lifecycles inc. butterfly, chickens, frog) hatch chicks from eggs	***Plants*** (types of plants & basic structure) Beatrix Potter (observational Drawings) ***Seasons (Summer)***	***Plants*** (what they need & how they grow) Jane Colden (Plant observations) Agnes Arber Science Day	***Light*** (vision, reflections & shadows) Ibn al-Haytham (Linking light to 'seeing')	***Electricity*** (circuits, conductors & insulators) Joseph Swan, Hertha Ayrton and Thomas Edison (Lightbulb) Nikola Tesla (Tesla) Science Day - Doorbells	***Earth and Space*** (day/night, relationship of sun, moon & earth) Tiera Guinn Fletcher Mae Jeminson (first female African in space) Aristarchus (discovers earth orbits sun) Galileo Galilei (observational astronomy father)	

Term 6	**Minibeasts**	Science Day – Zoo trip	***Habitats*** (suitability of habitats) Ernest Shackleton (Antarctica exploration) Science Day	***Forces and Magnets*** (repel & attract, movement)	***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)	***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) Science Day – We the Curious	***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)