Class 4

Science Overview – Cycle A

	Autumn Term Africa		Spring Term Planet in Peril	Summer Term Vikings	
Area of Science	Y5: Living things and their Habitats	Y6: Evolution and Inheritance	Y6: Electricity	Y6: Animals, including Humans	Y6: Living things and their Habitats
Knowledge	 Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some plants and animals 	 Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago Recognise that living things produce offspring of the same kind, but normally offspring vary an are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution 	 Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of ells used in the circuit Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches Use recognised symbols when representing a simple circuit in a diagram 	 Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood Recognise the impact of diet, exercise drugs and lifestyle on the way their bodies function Describe the ways in which nutrients and water are transported within animals, including humans 	 Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro- organisms, plants and animals Give reasons for classifying plants and animals based on specific characteristics
Key Vocabulary	gamete, stamen, stigma, carpel, pistil, pollination, germination, sexual reproduction, pollen, anther, filament, style, ovary, dissection, asexual, propagation, artificial, natural, metamorphosis, gestation, foetus, sperm, egg, uterus	offspring, characteristics, variation, inheritance, environmental variation, suitable, adaptation, characteristics, natural selection, evolution, fossils, theory, opinion, cladogram	electricity, circuit symbol, diagram, components, cell, battery, terminal, positive, negative, connection, loose connection, short circuit, wire, crocodile clip, bulb, bright, dim, switch, buzzer, volume, motor, faster, slower, voltage, current, conductor, insulator, resistance, causal relationship	blood, vessels, arteries, veins, capillaries, heart, oxygen, carbon dioxide, lungs, nutrients, water, circulatory system, exercise, diet, lifestyle, drugs, addiction, disease, medicine, alcohol, cigarettes, stimulant, depressant, analgesic, hallucinogen	classification, kingdom, phylum, class, order, family, genus, species, Linnaeus, similarities, differences, branching classification key, group, observations, support, refute, micro-organism, organism, taxonomy
Cross-curricular Links	PSHE – SRE, reproduction English – information texts Geography – locating living species based on climate, biomes, tropics etc	History – How has the human species evolved? English – biography of Darwin, information texts about the evolution of different animals	DT – creating moveable vehicles with circuits History – scientists, inventors, how have scientists built on previous work?	Maths – data handling, graphs PE – Fitness tests, use of muscles, exploring heart rate and how this is affected by exercise. PSHS – What effect do drugs have on the body?	Maths – Data handling and using different diagrams to sort information
Scientific Enquiry Methods	• Observe changes over time • Fair and comparative testing • Notice patterns and pattern seeking • Researching/secondary sources • Group and classify • Compare the set of the secondary sources • Group and classify • Compare the secondary sources • Compare the se				
Working Scientifically Skills	 Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations Identifying scientific evidence that has been used to support or refute ideas or arguments 				