Science Core Curriculum
Year 5

Unit	Animals including humans Explore Lifecycles	Living things and their habitats	Materials Properties of materials Changes of materials	Earth and Space	Forces
Substantive Knowledge	• Describe the changes as humans develop to old age	• 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 • They should find out about the work of naturalists and animal behaviourists, for example, David Attenborough and Jane Goodall.	• Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets • Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution • Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating • Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic • Compare and group together everyday materials based on evidence from comparative and fair tests, including their conductivity of heat	• Describe the movement of the Earth and other planets relative to the sun in the solar system • Describe the movement of the moon relative to the Earth • Describe the sun, Earth and moon as approximately spherical bodies • Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky	• Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object • Identify the effects of air resistance, water resistance and friction, that act between moving surfaces • Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect

Disciplinary knowledge	• Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • 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 • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Identifying scientific evidence that has been used to support or refute ideas or arguments	• 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 • Plan different types of scientific enquiries to answer questions, including controlling variables where necessary • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	• Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • 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 or arguments. • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • 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	• Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • 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 • Identifying scientific evidence that has been used to support or refute ideas or arguments	• Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • 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 or arguments.

Key Vocab	Animals including humans – life cycles:	Living things and their habitats:	Materials - properties:	Materials – changes:	Earth and Space:	Forces:
	foetus dependent adolescent puberty reproduce gestation pregnant duration extreme breeding womb umbilical chord embryo trimester midwife growth spurt childhood motor skills milk teeth constant adolescence hormones mood swing develop lifestyle keratin elasticity cataracts neurodegenerative	fertilisation genes sexual reproduction pollination pollen asexual plantlet bulb tuber bacteria unborn egg hatch fledgling mammary gland metamorphosis larva pupa tadpole butterfly David Attenborough natural sciences documentary naturalist lecture Jane Goodall Chimpanzee Primatologist Primate endangered	conductive magnetic durable transparent versatile thermal conduction molecules degrees Celsius (℃) insulator hardness force iron steel stone dissolve solute insoluble soluble solvent solute solution substance saturation pure substance mixture filtering sieving evaporation	pure substance solute solvent solution evaporate reversible mixture physical change melting evaporate irreversible chemical change compare effervescence product fair test variable control variable corrosion rusting combustion fuel oxygen extinguish smother reaction predict acid bicarbonate of soda carbon dioxide	heliocentric geocentric Nicolaus Copernicus orbit Ptolemy axis season poles eclipse hemisphere ocean tides gravitational force black hole Mass Celestial rocky planets gas planets dwarf planet Moon solar system astronomy universe Milky Way expand Big Bang theory phase orbit illuminate waxing waning	Sir Isaac Newton gravity astronomy weight mass Galileo Galilei air resistance opposing streamlined parachute water resistance streamlined upthrust buoyant sink friction resistance lubricant Newton meter Newton lever load pivot fulcrum pulley mechanism gear mesh rack and pinion bevel gear