The Piggott School: Charvil Primary

'Go and do Likewise' Luke 10:25, -37 The Parable of the Good Samaritan
We live with love and compassion, seeking help in times of need

Curriculum Map: Science Year 5

	Properties of Materials	Changes of materials	Earth and Space	Forces	Living things and their habitats	Animals including humans
Content Declarative Knowledge 'I know'	* Know the properties of materials. * Know about thermal conductors and thermal insulators. * Know about the hardness of materials. * Know materials that become soluble in water. * Know how mixtures could be separated by filtering, sieving, evaporating or magnets.	* Know how to use evaporation to recover the solute from a solution. * Recognise and describe reversible changes. * Understand chemical reactions and describe how we know new materials are made. * Understand rusting reactions. * Understand burning reactions. * Understand chemical reactions, including acids and bicarbonate of soda.	* Know about the solar system and its planets. * Understand the heliocentric model of the solar system. * Explain the Earth's movement in space. * Explain the earth rotation and night and day. * Explain the movement of the moon.	*explain gravity and the life and work of Isaac Newton *explain the connection between air resistance and parachutes *explain factors which affect an object's ability to resist water *understand the effects of friction on different surfaces *know about levers' pulley and gears	* Understand the life processes of a plant. * Understand the life cycles of mammals. * Compare the life cycles of insects and amphibians. * Understand the life cycle of birds and reptiles. * Know about the life and work of Jane Goodall and David Attenborough.	* Know the key stages of a mammals life cycle. * Know the gestation period of some mammals. * Know about foetal development * Know about the changes experienced during puberty. * Know about the changes humans may experience during adulthood and old age.
Skills Procedural Knowledge 'I know how to'	* Plan different types of scientific inquiries to answer questions, including recognising and controlling	* Report and present findings from inquiries, including conclusions, causal relationships and explanations of under degree of trust	* Identify scientific evidence that's been used to support or refute ideas or arguments.	* Identify scientific evidence that's been used to support or refute ideas or arguments.	* Plan different types of scientific inquiries to answer questions, including recognising and controlling	* Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter

	variables when necessary. * Take measurements, using a range of scientific equipment, with increasing accuracy and precision, Take repeat readings when appropriate. * Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar charts and line graphs. * Report and present findings from inquiries, including conclusions, causal relationships and explanations of under degree of trust in results, in oral and written forms such as displays and other presentations * Use test results to make predictions to set up further comparative and fair tests.	in results, in oral and written forms such as displays and other presentations * Plan different types of scientific inquiries to answer questions, including recognising and controlling variables when necessary. * Identify scientific evidence that has been used to support or refute ideas or arguments. * Use 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, take repeat readings when appropriate. * Report and present findings from inquiries, including conclusions, causal relationships and explanations of under degree of trust in results, in oral and written forms such as displays and other presentations * Use test results to make predictions to set up further comparative and fair tests.	* Report and present findings from inquiries, including conclusions, causal relationships and explanations of under degree of trust in results, in oral and written forms such as displays and other presentations * Plan different types of scientific inquiries to answer questions, including recognising and controlling variables when necessary.	variables when necessary. * Report and present findings from inquiries, including conclusions, causal relationships and explanations of under 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.	graphs, bar charts and line graphs. * Report and present findings from inquiries, including conclusions, causal relationships and explanations of under degree of trust in results, in oral and written forms such as displays and other presentations * Take measurements, using a range of scientific equipment, with increasing accuracy and precision, take repeat readings when appropriate. * Identify scientific evidence that has been used to support or refute ideas or arguments.
Vocabulary	Conductive, magnetic, durable, transparent,	Pure substance, solute, solvent, solution,	Terrestrial planet, gas giant planet, solar	Gravity, astronomy, wait, mask on air	Reproduction, asexual, Fertilisation., tuber,	Foetus, dependent, adolescent, puberty,

	versatile, thermal, conduction, molecules, degrees Celsius, insulator, Hardness, force, iron, steel, stone, dissolve, Solute, insoluble, soluble, solvent., substance, saturation, pure substance, mixture, filtering, sieving, evaporation.	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.	system, spherical, orbit, astronomy, heliocentric, geocentric, dwarf planet, orbit, axis, poles, season, hemisphere, orbit., sundial, time zone, gnomon, dial, shadow, Moon phase, waxing, waning, eclipse, rocky planet, gas planet, orbit	resistance, opposing, streamlined, parachute, water resistance, streamlined, upthrust, buoyant, sink, friction, resistance, lubricant, Newton, Newton meter, lever, load, pivot, fulcrum, pulley, mechanism, gear, mesh, rack and pinion, bevel gear	jeans, pouch, mammary glands, placental mammal, monitoring mammal, marsupial, metamorphosis, caterpillar, amphibian, larva, pupa, egg, fledgling, egg tooth, hatch, embryo., documentary, naturalist, primatologist, endangered, natural scientist, , living organism, reproduction, life cycle, vertebrate, warm- blooded	reproduced, gestation, pregnant, duration, extreme, breeding, womb, umbilical cord, embryo, trimester, midwife, growth spurt., childhood, motor skills, milk teeth, constant, adolescence, puberty, hormones, mood swing, develop, lifestyle, keratin, elasticity, cataracts, neurodegenerative.
Key Questions	What are things made of and why? Which materials would be the most effective for ...?	What are the differences between reversible and irreversible changes?	What are the key features of our solar system? How have theories of our solar system changed over time?	What is gravity? What are the effects of air resistance and friction on moving objects? How do levers, pulleys and gears act?	What are the key similarities and differences in the life cycles of mammals, amphibians, birds and insects?	What are the key stages of human development?
Assessment	Assessment on Insight every term as well as lesson by lesson observations based on knowledge, skills and key questions outlined above Peer and self-assessment opportunities Option to use White Rose End of Block assessments at teacher's discretion					
Cross Curricular Links/Character Education	Spiritual – learning about the world around them and reflecting on experiences. Social – cooperating and working together	Spiritual – learning about the world around them and reflecting on experiences. Social – cooperating and working together	Spiritual – learning about the world around them and reflecting on experiences. Social – cooperating and working together	Spiritual – learning about the world around them and reflecting on experiences. Social – cooperating and working together	Spiritual – learning about the world around them and reflecting on experiences. Social – cooperating and working together	Spiritual – learning about the world around them and reflecting on experiences. Social – cooperating and working together

	DT – choose best material for specific purpose	DT – choose best material for specific purpose	History – historical misconceptions about the Earth and scientists who challenged these	DT - levers and pulleys	PSHE – changing me units	PSHE – changing me units