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 4

	Animals including humans	**Living things and their habitats**	**Living things and their habitats - Conservation**	**States of Matter**	**Sound**	**Electricity**
Content Declarative Knowledge 'I know'	* Name the organs in the digestive system. * Describe the functions of the main organs in the digestive system. * Name the types of human teeth and their functions. * Know the effects of different liquids on teeth. * Understand food chains. * Understand food webs.	* Name and explore different habitats. * Know how animals can be classified * Know how to create a classification key * Be able to explain adaptations on classification within species. * Know how to classify pond plants	* describe ecosystems and how they are affected by changes in the seasons. * Understand the human impact on the environment through deforestation. * Understand air pollution. * Understand water pollution. * Know methods that can be used to conserve water. * Understand that humans can have a positive impact on nature.	* Compare and group the three states of matter. * Know how particles behave in solids, liquids and gases. * Know what melting points are. * Know what freezing points are. * Know what boiling points are. * Know what evaporation is. * Know what condensation is. * Understand the water cycle.	*identify how sounds are made *know how vibrations from sounds travel through a medium to the ear *understand sound insulation *know what volume is *know what pitch is *know how sounds change over distance	*know about electrical appliances and electrical safety *know about electrical components in a series circuit *explore conductors and insulators, *know about electrical switches
Skills Procedural Knowledge 'I know how to'	* Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.	* Identify differences, similarities, or changes related to simple scientific processes and ideas	* Gather, record, classify and present data in a variety of ways to help answer questions.	* Gather, record, classify and present data in a variety of ways to help answer questions.	* Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	* Report on findings from enquiries, including oral and written explanations, displays or presentations of

	* Make systematic and careful observations * Report on findings from enquiries, including oral and written explanations. * Set up simple practical enquiries, comparative and fair tests. * Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	* Report on findings from enquiries, including oral and written explanations. * Gather, 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.	* Use straightforward scientific evidence to answer questions or to support their findings. * Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. * make systematic and careful observations, and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. * Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	* Use straightforward scientific evidence to answer questions or to support their findings. * make systematic and careful observations, and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. * Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. * Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. * Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.	* Identify differences, similarities, or changes related to simple scientific processes and ideas * Set up simple practical enquiries, comparative and fair tests. * make systematic and careful observations, and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. * Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.	results and conclusions. * Use straightforward scientific evidence to answer questions or to support their findings. * Gather, present data in a variety of ways to help in answering questions. * Set up simple practical enquiries, comparative and fair tests. * make systematic and careful observations, and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. *ask relevant questions and use different types of scientific enquiries to answer them
Vocabulary	Digestive system, oesophagus, stomach., small intestine, large	habitat, microhabitat, conditions, adapted, camouflage, Coastal,	Ecosystem, northern hemisphere, southern hemisphere, migrate,	Matter, solid, liquid, gas, volume, particle, bored, arranged, cold,	Vibration, medium, waves, eardrum, signals, source, energy, particles,	Electricity, batteries, mains electricity, appliance, socket,

	intestine, saliva, peristalsis, absorb, liver, gall bladder, incisors, canines, molars, jaw, gum, enamel, plaque, tooth decay, cavity, fluoride, ecosystem, producer, consumer, prey, predator, food web, tundra, hide, interdependence, threatened.	Grassland, Environment, Climate, exposure, classify, characteristics, vertebrate, Invertebrate, species, sub- groups, identify, criteria, classification Keys, Organism, adapted, region, features, colouring, blubber, ecosystem, oxygenized, flowering plant, common non-flowering plant, pond dipping.	monsoon, rainforest, deforestation, drought, biodiversity, recycling, fossil fuels, pollution, greenhouse gases, emissions, climate change, chemicals, sewage, contaminate, pesticides, water treatment, plant, conserve, drought, fresh water, pure, water, but, endangered, marine sanctuaries, protect, conservation areas, recycling.	heated, particle, melting, melting point, temperature, thermometer, freezing, reverse, boiling, sublimation, deposition, evaporation, condensation, absorb, water vapour, process, water vapour, process, water cycle, precipitation, surface runoff, transpiration, groundwater	echo, vacuum, materials, reflect, absorb, insulate, defenders, volume, decibels, decibel metre, amplitude, power, pitch, high pitch, low pitch, instruments, orchestra, energy, particles, travel, sound source, fade	circuit, series circuit, component, cell, voltage, current, power, battery, wire, bulb, conductor, insulator, metal, copper, rubber, switch, current, control, complete circuit, incomplete circuit, non-renewable energy, renewable energy, wind turbines, solar panels, hydropower
Key Questions	How do we digest out food and what happens to it once it is digested? Why do we have some many different teeth? What different jobs do they do? How do our teeth decay?	How do all living things survive?	What are the main threats to certain species? How or does this affect our daily lives? What changes can we make to reduce the impact?	What are the states of matter? Can an object change state? If an object changes state, can it change back again? Are there only four states of matter? Why do some solids behave like liquids and vice versa?	How does sound travel? How does the ear work? What makes different sounds?	How is electricity made? How does electricity travel?
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 Developing Experts 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	Classification keys, environment, fish, amphibians, reptiles, birds, mammals, vertebrates, invertebrates, names	Spiritual – learning about the world around them and reflecting on experiences. Social –	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 –

	PE – body systems	Geography – human impact on the environment	of them, human impact, positive, negative (impact).	cooperating and working together Geography – The Water Cycle	Music – pitch and volume	cooperating and working together Life learning – safety around electricity DT – incorporate a circuit into a 3D model