

Subject Area – Science Year Group - 4

Term	Autumn One	Autumn Two	Spring One	Spring Two	Summer
Topic	States of Matter	Electricity	Sound	The Digestive System (Animals Including Humans)	Living things in their habitats
Scientific enquiry	Classifying	Pattern seeking	Researching	Comparative/fair testing	Observing over time
Working scientifically skills	To ask scientific questions	To gather/record results To present results To interpret results	To plan an enquiry To make a prediction	To observe closely To measure accurately	To draw conclusions To evaluate an investigation
Building science capital	Science museum? Experiments	Local electricians to visit via zoom?	Musicians Hearing tested with auditory doctor (ENT)	Animals in the local environment	Bug garden (hospital) Find living things in their habitats Pond
Composite knowledge	What is a solid, liquid, gas? What processes occur when changing state? What is the water cycle and how does it work?	How does electricity work? How do we construct a working circuit? Why does a circuit work?	How are sounds made? How does the human ear work?	How does the human digestive system work? What are the functions of human teeth? How does the food chain work?	What impact do humans play on the environment? What are the different groups of living things in my environment? How can changes in the environment impact living things?
Component knowledge	compare and group materials together, according to whether they are solids, liquids or gases observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)	identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers identify whether or not a lamp will light in a simple series	identify how sounds are made, associating some of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear find patterns between the pitch of a sound and features of the object that produced it	describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions construct and interpret a variety of food chains, identifying producers, predators and prey	recognise that living things can be grouped in a variety of ways explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment recognise that environments can change and that this can sometimes pose dangers to living things identify the characteristics of living things. discuss how to make a positive impact on the environment

	<p>identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</p>	<p>circuit, based on whether or not the lamp is part of a complete loop with a battery</p> <p>recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>recognise some common conductors and insulators, and associate metals with being good conductors</p>	<p>find patterns between the volume of a sound and the strength of the vibrations that produced it</p> <p>recognise that sounds get fainter as the distance from the sound source increases</p>		
Vocabulary	<p>Solid, Liquid, Gas, Evaporation, Condensation, Particles, Temperature, Freezing, Heating</p>	<p>Cells, Wires, Bulbs, Switches, Buzzers, Battery, Circuit, Series, Conductors, Insulators</p>	<p>Volume, Vibration, Wave, Pitch, Tone, Speaker</p>	<p>Mouth, Tongue, Teeth, Oesophagus, Stomach, Small Intestine, Large Intestine, Herbivore, Carnivore, Canine, Incisor, Molar</p>	<p>Vertebrates, Fish, Amphibians, Reptiles, Birds, Mammals, Invertebrates, Snails, Slugs, Worms, Spiders, Insects, Environment, Habitats</p>
Links to prior knowledge	<p>Year 1-Seasonal Change</p>			<p>Year One- Senses Year Two Year Three</p>	<p>Year Two</p>
Key knowledge for assessment	<p>Compare similarities and difference of various materials.</p> <p>Explain the impact melting and freezing has on states of matter.</p>	<p>Label simple circuits using the correct scientific vocabulary</p> <p>Understand how a simple circuit works and how electricity travels.</p>	<p>Describe how sound can travel through different mediums</p> <p>Identify the parts and explain the function of the human ear.</p> <p>Explain how vibrations work and their impact on pitch and volume.</p>	<p>Identify different parts of the digestive system and how they work together.</p> <p>Identify teeth and their functions.</p>	<p>Name the different groups of living things</p> <p>Understand how the environment changes and how this can be done by and to living things.</p>

Cross-curricular links	Topic- Volcanoes	Fluency- Reading lesson	Music- lessons with Music teacher	Health/Food technology- What is healthy?	Fluency- Reading lesson Non Chronological Reports- Literacy Topic- Climate zones/habitats
Oracy & Outdoor learning	Outdoor Learning- particle experiment Oracy- Present a poster	Outdoor Learning- Making a human circuit Oracy- breaking news story- electricity experts	Outdoor learning- Experiment about sound travel Oracy- Discussing what they can hear and sound- close or far	Outdoor learning- Digestive system model Oracy- TTYP/discussions in lessons	Outdoor learning- Bug garden (hospital), Find living things in their habitats, pond dipping Oracy- TTYP/discussions