

Year 4 Units

	Working Scientifically	Living things and their habitats	Animals, including humans	Electricity	Sound	States of matter
Children working below age-related expectations will be:		<ul style="list-style-type: none"> ■ With support/suggested categories, group living things in a variety of ways. ■ Use simple classification keys to help name a variety of living things in their local and wider environment. ■ When descriptions of how environments have changed pupils can suggest what danger this can be to living things. 	<ul style="list-style-type: none"> ■ To name some of the basic parts of the digestive system in humans. ■ To identify the different types of teeth in humans. ■ To interpret a variety of food chains, identifying producers, predators and prey. 	<ul style="list-style-type: none"> ■ Name some common appliances that run on electricity. ■ Construct using a model, a simple series electrical circuit, naming its basic parts, including cells, wires, bulbs, switches and buzzers. ■ Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. ■ Recognise that a switch causes a bulb to turn on and off. Pupils may recognise that the switch impacts the circuit and effects the flow of electricity ■ Associate metals as being good conductors. 	<ul style="list-style-type: none"> ■ Identify how sounds are made, associating the sound being made by hitting, blowing, plucking something ■ Recognise that vibrations from sounds travel to the ear ■ With support recognise that there is a pattern between the pitch of a sound and features of the object that produced it ■ Find patterns between the volume of a sound and the strength of the action that produced it ■ Recognise that when you are further away from a sound being produced it is harder to hear and quieter. 	<ul style="list-style-type: none"> ■ With support compare and group materials together, according to whether they are solids, liquids or gases ■ Observe that some materials look different or appear to disappear (change state) when they are heated or cooled, and measure (maybe inaccurately) or with guidance research the temperature at which this happens in degrees Celsius (°C) ■ Identify the part played by heating (evaporation) and cooling (condensation) in the water cycle and associate the rate of evaporation with temperature.
Children working at age-related expectations will:	<p>During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> ■ asking relevant questions and using different types of scientific enquiries to answer them ■ setting up simple practical enquiries, comparative and fair tests ■ making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers ■ gathering, recording, classifying and presenting data in a variety of ways to help in answering questions ■ recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables ■ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ■ using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ■ identifying differences, similarities or changes related to simple scientific ideas and processes ■ using straightforward scientific evidence to answer questions or to support their findings. 	<ul style="list-style-type: none"> ■ 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. 	<ul style="list-style-type: none"> ■ 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. 	<ul style="list-style-type: none"> ■ 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 circuit, based on whether or not the lamp is part of a complete loop with a battery. ■ Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. ■ Recognise some common conductors and insulators, and associate metals with being good conductors. 	<ul style="list-style-type: none"> ■ 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 ■ find patterns between the volume of a sound and the strength of the vibrations that produced it ■ recognise that sounds get fainter as the distance from the sound source increases. 	<ul style="list-style-type: none"> ■ 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 the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
Children working above age-related expectations will:		<ul style="list-style-type: none"> ■ Suggest a variety of different ways that living things can be grouped. ■ Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Pupils can work upwards and downwards on a key ■ Suggest different ways environments can change and describe/explain how this can sometimes pose dangers to living things. 	<ul style="list-style-type: none"> ■ To describe in some detail the functions of the basic parts of the digestive system in humans. ■ To identify the different types of teeth in humans and their simple functions. To relate this knowledge to animal teeth & their diet ■ To construct and interpret a variety of food chains, identifying producers, predators and prey. To know that all food chains trace back to a green plant. 	<ul style="list-style-type: none"> ■ Identify common appliances that run on electricity; both mains and battery ■ Construct a range of simple series electrical circuits, 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 circuit, based on whether or not the lamp is part of a complete loop with a battery...pupils may predict/experiment with the number of cells and describe the effect this has on the brightness of the bulb ■ Explain that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. ■ Recognise a variety of common conductors and insulators, and associate metals with being good conductors. 	<ul style="list-style-type: none"> ■ Explains that sounds are made, by something vibrating ■ Explains that vibrations from sounds travel through a medium to the ear and can give examples of that medium ■ Describes (using comparative language) patterns between the pitch of a sound and features of the object that produced it ■ Describes patterns between the volume of a sound and the strength of the vibrations that produced it ■ Recognise that sounds appear to get fainter as the distance from our ears and the sound source increases. 	<ul style="list-style-type: none"> ■ Name, compare and group materials together, according to whether they are solids, liquids or gases . Explain that some solids can behave like liquids eg powders and grains. ■ Describe and name the changes of state that occur when materials are heated or cooled, and measure with accuracy or research independently the temperature at which this happens in degrees Celsius (°C) ■ Explain the water cycle clearly with reference to the part played by evaporation and condensation and associate the rate of evaporation with temperature by making a comparative statement.