	Science Skills and Knowledge Progression	
	Year 3	**Year 4**
Knowledge and concepts	**Plants** Can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. Can explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. Can investigate the way in which water is transported within plants. Can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	**Livings things and their habitats** Can compare how things move on different surfaces. Can notice that some forces need contact between two objects, but magnetic forces can act at a distance. Can observe how magnets attract or repel each other and attract some materials and not others describe magnets as having two poles. Can predict whether two magnets will attract or repel each other, depending on which poles are facing. Can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials
Knowledge and concepts	**Animals including humans** Can identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Can identify that humans and some other animals have skeletons and muscles for support, protection and movement.	**Animals including humans** Can describe the simple functions of the basic parts of the digestive system in humans. Can identify the different types of teeth in humans and their simple functions. Can construct and interpret a variety of food chains, identifying producers, predators and prey.
Knowledge and concepts	**Rocks** Can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Can describe in simple terms how fossils are formed when things that have lived are trapped within rock. Can recognise that soils are made from rocks and organic matter.	**States of matter** Can compare and group materials together, according to whether they are solids, liquids or gases. Can 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). Can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Knowledge and concepts	**Light** Can recognise that they need light in order to see things and that dark is the absence of light. Can notice that light is reflected from surfaces. Can recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Can recognise that shadows are formed when the light from a light source is blocked by a solid object. Can find patterns in the way that the size of shadows change	**Sound** Can identify how sounds are made, associating some of them with something vibrating. Can recognise that vibrations from sounds travel through a medium to the ear. Can find patterns between the pitch of a sound and features of the object that produced it. Can find patterns between the volume of a sound and the strength of the vibrations that produced it. Can recognise that sounds get fainter as the distance from the sound source increases.
Knowledge and concepts		**Electricity** Can identify common appliances that run on electricity. Can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Can 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. Can recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Can recognise some common conductors and insulators, and associate metal

Knowledge and concepts	**Forces and Magnets** Can compare how things move on different surfaces. Can notice that some forces need contact between two objects, but magnetic forces can act at a distance. Can observe how magnets attract or repel each other and attract some materials and not others describe magnets as having two poles. Can predict whether two magnets will attract or repel each other, depending on which poles are facing. Can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.	
Working Scientifically	**Planning a scientific Investigation** Pupils should be taught to: ask relevant questions and use different types of scientific enquiries to answer them set up simple practical enquiries, comparative and fair test	**Planning a scientific Investigation** Pupils should be taught to: ask relevant questions and use different types of scientific enquiries to answer them set up simple practical enquiries, comparative and fair test
Working Scientifically	**Measuring & Recording** make systematic and careful observations using notes and simple tables take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers gather , record, classify and present data in a variety of ways to help in answering questions record findings using results to draw simple scientific language, drawings, labelled diagrams, bar charts and tables. Report on findings from enquiries using relevant scientific language, including oral and written explanations, displays or presentations of results and conclusions Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	**Measuring & Recording** make systematic and careful observations using notes and simple tables take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers gather , record, classify and present data in a variety of ways to help in answering questions record findings using results to draw simple scientific language, drawings, labelled diagrams, bar charts and tables. Report on findings from enquiries using relevant scientific language, including oral and written explanations, displays or presentations of results and conclusions Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.

Working Scientifically	**Evaluating& Concluding** Identify differences, patterns, similarities, or changes related to simple scientific ideas and processes Use straightforward scientific evidence to answer questions or to support their findings Recognise when and how secondary sources might help them answer questions that cannot be answered through practical investigations. Pupils should read, spell and pronounce scientific vocabulary correctly	**Evaluating& Concluding** Identify differences, patterns, similarities, or changes related to simple scientific ideas and processes Use straightforward scientific evidence to answer questions or to support their findings Recognise when and how secondary sources might help them answer questions that cannot be answered through practical investigations. Pupils should read, spell and pronounce scientific vocabulary correctly