Year 4 Knowledge progression	Previous objectives taught…	Children working at national standard…
Working Scientifically	• Asking simple questions and recognising that they can be answered in different ways. (Year1/2) • Observing closely, using simple equipment.(Year1/2) • Performing simple tests.(Year1/2) • Identifying and classifying.(Year1/2) • Using their observations and ideas to suggest answers to questions.(Year1/2) • Gathering and recording data to help in answering questions.(Year1/2) • Asking relevant questions and using different types of scientific enquiries to answer them. (Year3) • Setting up simple practical enquiries, comparative and fair tests. (Year3) • Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. (Year3) • Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. (Year3) • Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. (Year3) • Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. (Year3) • Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. (Year3) • Identifying differences, similarities or changes related to simple scientific ideas and processes. (Year3) • Using straightforward scientific evidence to answer questions or to support their findings. (Year3)	**Same objectives as Year 3 however some children should be showing greater depth In some areas of working scientifically.** • 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.
Animals, including humans	• Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals including pets). (Year 1) • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Year 1) • Notice that animals, including humans, have offspring which grow into adults. (Year 2)	• 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.

	• Find out about and describe the basic needs of animals, including humans, for survival (water, food, air). (Year 2) • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (Year 2) • 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. (Year 3) • Identify that humans and some other animals have skeletons and muscles for support, protection and movement. (Year 3)	
Living things and their habitats	• Explore and compare the differences between things that are living, dead, and things that have never been alive. (Year 2) • Identify and name a variety of plants and animals in their habitats, including micro-habitats. (Year 2) • Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. (Year 2) • Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. (Year 2)	• 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 constantly changing and that this can sometimes pose dangers to specific habitats
States of matter		• 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.
Electricity		• Identify common appliances that run on electricity. • Construct a simple series electrical circuit identifying and naming the basic parts of a simple electrical circuit, 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.
Sound		• Identify how sounds are made, associating some of them with something vibrating. • Recognise that vibrations from sound travel through a medium to the ear. • Recognise that sounds get fainter as the distance from the sound source increases. • 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.