

Key Knowledge/Skills/Understanding in Science

Year 1		Biology	Chemistry	Physics	Working Scientifically
		Plants	Animals	Everyday materials	
Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees		Identify and describe the basic structure of a variety of common flowering plants, including trees		Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	
Identify and name a variety of common animals that are carnivores, herbivores and omnivores		Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)		Distinguish between an object and the material from which it is made	
Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense		Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock		Describe the simple physical properties of a variety of everyday materials	
				Compare and group together a variety of everyday materials on the basis of their simple physical properties	
				Observe changes across the 4 seasons	
				Observe and describe weather associated with the seasons and how day length varies	
				Ask simple questions and recognising that they can be answered in different ways Observe closely, using simple equipment, performing simple tests Identify and classify, using their observations and ideas to suggest answers to questions, gathering and recording data to help in answering questions	

Year 2 Biology			Chemistry	Working Scientifically
Living things and their habitats		Plants	Animals including humans	Uses of everyday materials
Explore and compare the differences between things that are living, dead, and things that have never been alive	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	Identify and name a variety of plants and animals in their habitats, including microhabitats	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	Observe and describe how seeds and bulbs grow into mature plants
		Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy	Notice that animals, including humans, have offspring which grow into adults	Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
			Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
			Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	Ask simple questions and recognising that they can be answered in different ways.
				Observe closely, using simple equipment, performing simple tests.
				Identify and classify, using their observations and ideas to suggest answers to questions, gathering and recording data to help in answering questions.

Year 3 Biology		Chemistry	Physics		Working Scientifically
Plants	Animals including humans	Rocks	Light	Forces and Magnets	
Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers					
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					
Investigate the way in which water is transported within plants					
Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal					
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					
Identify that humans and some other animals have skeletons and muscles for support, protection and movement					
Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties					
Describe in simple terms how fossils are formed when things that have lived are trapped within rock					
Recognise that soils are made from rocks and organic matter					
Notice that light is reflected from surfaces					
Recognise that they need light in order to see things and that dark is the absence of light					
Recognise that light from the sun can be dangerous and that there are ways to protect their eyes					
Recognise that shadows are formed when the light from a light source is blocked by a solid object					
Find patterns in the way that the size of shadows change					
Compare how things move on different surfaces					
Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance					
Observe how magnets attract or repel each other and attract some materials and not others					
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					
Describe magnets as having 2 poles					
Predict whether 2 magnets will attract or repel each other, depending on which poles are facing					
Use different types of scientific enquiries and evidence to answer questions					
With support, set up simple practical enquiries, fair tests, making observations and, taking accurate measurements using a range of equipment.					
Gather, record, classify and present data, record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.					
Report on findings from enquiries, using results to begin to draw simple conclusions, make predictions for new values, suggest improvements.					

Year 4 Biology		Chemistry	Physics				Working Scientifically
Living things and their environment		States of matter	Sound		Electricity		
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							
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							
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							
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							
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							
Use different types of scientific enquiries and evidence to answer questions.							
Setting up simple practical enquiries, comparative and fair tests, making observations and, taking accurate measurements using a range of equipment.							
Gather, record, classify and present data.							
Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.							
Report on findings from enquiries, using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.							

