	Year 1	Year 2
Pupils should be taught to:		
Working Scientifically		
asking simple questions and recognising that they can be answered in different ways		
observing closely, using simple equipment		
performing simple tests		
identifying and classifying		
using their observations and ideas to suggest answers to questions		
gathering and recording data to help in answering questions.		
Plants		
identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen		
identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.		
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.		
Animals, including humans		
identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates		
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 (birds, fish, amphibians, reptiles, mammals and invertebrates, and including pets)		
identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.		
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.		
All living things and their habitats		
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 micro-habitats		
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.		
Everyday Materials /Uses of Everyday Materials		
distinguish between an object and the material from which it is made		
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		
find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.		
identify and compare the uses of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard		
compare how things move on different surfaces.		
Seasonal Changes		
observe changes across the four seasons		
observe and describe weather associated with the seasons and how day length varies.		

	Year 3	Year 4
Pupils should be taught to:		
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.		
Plants Y3		
identify and describe the functions of different parts of flowering plants: roots, stem, 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.		
Animals including Humans Y3 & 4 (shaded)		
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 animals have skeletons and muscles for support, protection and movement.		
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.		
Rocks Y3		
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.		
Light Y3		
recognise that they need light in order to see things and that dark is the absence oof light		
notice that light is reflected from surfaces		
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 the size of shadows change shadows.		
Forces and Magnets Y3		
compare how things move on different surfaces		
notice that some forces need contact between two 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 two poles		
predict whether two magnets will attract or repel each other, depending on which poles are facing.		
Living things and their habitats		
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.		
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.		
Sound		
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 sound gets fainter as the distance from the sound source increases		
Electricity		
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.		

	Year 5	Year 6
Pupils should be taught to:		
Working Scientifically		
planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary		
taking measurements, using a range of scientific equipment, with increasing accuracy and precision		
recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs		
using test results to make predictions to set up further comparative and fair tests		
reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations		
identifying scientific evidence that has been used to support or refute ideas or arguments.		
Living things and their habitats		
describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird		
describe the life process of reproduction in some plants and animals.		
describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals		
give reasons for classifying plants and animals based on specific characteristics.		
Animals including Humans		
describe the changes as humans develop to old age.		
identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood		
recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function		
describe the ways in which nutrients and water are transported within animals, including humans.		
Properties and changes of materials		
compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets		
know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution		
use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating		
give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic		
demonstrate that dissolving, mixing and changes of state are reversible changes		
explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.		
Earth and Space		
describe the movement of the Earth, and other planets, relative to the Sun in the solar system		
describe the movement of the Moon relative to the Earth		
describe the Sun, Earth and Moon as approximately spherical bodies		
use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky		
Forces		
explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object		
identify the effects of air resistance, water resistance and friction, that act between moving surfaces		
recognise that some mechanisms, including levers, pulleys and gears , allow a smaller force to have a greater effect		
Evolution and Inheritance		
recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago		
recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents		
identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution		
Light		
understand that light appears to travel in straight lines		
use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye		
explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes		
use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them		
Electricity		
associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit		
compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches		
use recognised symbols when representing a simple circuit in a diagram.		