








	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year R	<p>ELG: The Natural World</p> <ul style="list-style-type: none"> Explore the natural world around them, making observations and drawing pictures of animals and plants. Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. 					
			<p>Biology: Plants Growth Needs - Eating - Plant Parts</p>  <ul style="list-style-type: none"> What do plants need to grow? Which plants do we eat? What different parts of plants are there? What plants are there around us? <p><i>branches, crop, flowers, leaf, plant, root, seed, stem, tree, trunk, vegetable</i></p>	<p>Physics: Forces and Magnets Floating/Sinking - Magnets</p>  <ul style="list-style-type: none"> What floats and what sinks? What do magnets do? How do magnets interact with materials? How do objects change when you apply a force? <p><i>magnetic, not magnetic, pull, stick, attract, metal, wood, plastic, fabric, paper, cotton wool</i></p>	<p>Physics: Seasonal Changes Seasons</p>  <ul style="list-style-type: none"> What are the four seasons called? Do they always happen in the same order? Does the weather change with each season? How does this affect what we wear and what we do? What changes can we observe in each season (plants; day length)? <p><i>autumn, spring, summer, winter</i></p>	
		<p>Chemistry: Materials Materials - Describing Materials</p>  <ul style="list-style-type: none"> What are the objects around us made from? How can we describe different materials (shiny/dull, soft/hard, rough/smooth, strong/soft, bendy, stretchy)? <p><i>material, wood, plastic, metal, fabric, sand, soil, brick</i></p>		<p>Chemistry: Changing Materials Melting/Freezing</p>  <ul style="list-style-type: none"> What is melting and freezing? What happens to different liquids when you make them hotter or colder? <p><i>melting, freezing, hot, cold</i></p>		

Physics: Seasonal Changes

Weather - Days - Seasons

taught throughout year as ongoing observing over time enquiry

1	What is Autumn like? K: Observe changes across the four seasons. Observe and describe weather associated with the season and how day length varies. WS: Asking simple questions and recognising that they can be answered in different ways. Gathering and recording data to help in answering questions. <i>Observing Over Time; Identifying and Classifying</i>
2	What is Winter like? K: Observe changes across the four seasons. Observe and describe weather associated with the season and how day length varies. WS: Asking simple questions and recognising that they can be answered in different ways. Gathering and recording data to help in answering questions. <i>Observing Over Time; Identifying and Classifying</i>
3	What is Spring like? K: Observe changes across the four seasons. Observe and describe weather associated with the season and how day length varies. WS: Asking simple questions and recognising that they can be answered in different ways. Gathering and recording data to help in answering questions. <i>Observing Over Time; Identifying and Classifying</i>
4	What is Summer like? K: Observe changes across the four seasons. Observe and describe weather associated with the season and how day length varies. WS: Asking simple questions and recognising that they can be answered in different ways. Gathering and recording data to help in answering questions. <i>Observing Over Time; Identifying and Classifying</i>
5	What are the main changes in each season? K: Observe and describe weather associated with the season and how day length varies. WS: Using their observations and ideas to suggest answers to questions. <i>Observing Over Time; Identifying and Classifying</i>

season, Autumn, Winter, Spring, Summer, weather, daylight, night, rain, cloud, frost, sun, snow, sleet, wind, rain gauge

Chemistry: Everyday Materials

Materials - Objects - Properties

1	What material is this? K: Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. WS: Identifying and classifying. <i>Identifying and Classifying</i>
2	How would you describe the materials? K: Describe the simple physical properties of a variety of everyday materials. WS: Observing closely, using simple equipment [hand lenses]. <i>Identifying and Classifying</i>
3	What is an object and material? K: Distinguish between an object and the material from which it is made. WS: Identifying and classifying. <i>Identifying and Classifying</i>
4	What is the difference between water and ice? K: Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. WS: Performing simple tests. <i>Comparative Testing</i>
5	Which materials float and sink? K: Compare and group together a variety of everyday materials on the basis of their simple physical properties. WS: Performing simple tests; gathering and recording data to help in answering questions. <i>Pattern Seeking</i>
6	Which materials are transparent and opaque? K: Compare and group together a variety of everyday materials on the basis of their simple physical properties. WS: Using their observations and ideas to suggest answers to questions. <i>Identifying and Classifying</i>

material, plastic, fabric, metal, glass, wood, rock, water, properties, object, soft, hard, shiny, dull, heavy, light, rough, smooth, solid, liquid, melt, freeze, ice, float, sink, transparent, opaque, variables, investigation

Biology: Animals, Including Humans

Human Body Parts

1	What are the basic parts of the human body? K: Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. WS: Asking simple questions and recognising that they can be answered in different ways and using their observations and ideas to suggest answers to questions. <i>Identifying and Classifying</i>
2	Which part of the body do you see with? K: Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. WS: Performing simple tests. <i>Pattern Seeking</i>
3	Which part of the body do you hear with? K: Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. WS: Performing simple tests. <i>Pattern Seeking</i>
4	Which part of the body do you taste with? K: Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. WS: Performing simple tests. <i>Pattern Seeking</i>
5	Which part of the body do you touch with? K: Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. WS: Performing simple tests. <i>Pattern Seeking</i>
6	Which part of the body do you smell with? K: Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. WS: Performing simple tests. <i>Pattern Seeking</i>

skin, head, neck, arms, elbows, hands, legs, knees, feet, face, ears, eyes, nose, hair, mouth, teeth, senses, sight, touch, hearing, smell, taste, light, dark, loud, quiet, sweet, salty, sour, savoury, bitter, rough, smooth, hard, soft

Biology: Plants

Plant Groups - Plant Structure

1	What are the different parts of a flowering plant? K: Identify and describe the basic structure of a variety of common flowering plants, including trees. WS: Identifying and classifying. <i>Identifying and Classifying</i>
2	What are the different parts of a tree? K: Identify and describe the basic structure of a variety of common flowering plants, including trees. WS: Identifying and classifying. <i>Identifying and Classifying</i>
3	How can we sort plants into different groups? K: Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. WS: Identifying and classifying; observing closely, using simple equipment; using their observations and ideas to suggest answers to questions. <i>Identifying and Classifying; Research</i>
4	What plants and trees are there in my local area? K: Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. WS: Identifying and classifying; gathering and recording data to help in answering questions. <i>Identifying and Classifying; Research; Pattern Seeking</i>
5	What is the difference between a deciduous and evergreen tree? K: Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. WS: Identifying and classifying. <i>Identifying and Classifying</i>

plant, tree, flower, petals, leaf, stem, roots, branch, trunk, fruit, wildflower, daisy, sunflower, garden plant, nettle, buttercup, dandelion, deciduous, evergreen, oak, horse chestnut, sycamore, pine, holly, needles

Biology: Animals, Including Humans

Animal Groups

1	What is a mammal? K: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. WS: Identifying and classifying; asking simple questions and recognising that they can be answered in different ways. <i>Identifying and Classifying; Pattern Seeking</i>
2	What is a bird? K: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. WS: Identifying and classifying; observing closely, using simple equipment. <i>Identifying and Classifying; Pattern Seeking</i>
3	What is a fish? K: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. WS: Identifying and classifying. <i>Identifying and Classifying; Pattern Seeking</i>
4	What is an amphibian? K: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. WS: Identifying and classifying; using their observations and ideas to suggest answers to questions. <i>Identifying and Classifying; Pattern Seeking</i>
5	What is a reptile? K: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. WS: Identifying and classifying. <i>Identifying and Classifying; Pattern Seeking</i>
6	Are all animals the same? K: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). WS: Identifying and classifying. <i>Identifying and Classifying</i>
7	What is the difference between a carnivore, herbivore and omnivore? K: Identify and name a variety of common animals that are carnivores, herbivores and omnivores. WS: Identifying and classifying. <i>Identifying and Classifying</i>

animal, mammal, bird, fish, reptile, amphibian, carnivore, herbivore, omnivore, fur, wild, pet, wings, beak, feathers, webbed feet, flipper, fin, tails, scales, gills, frog, toad, newt, lizard, crocodile, turtle, tortoise, snake, plants, meat.

Chemistry: Everyday Materials and Their Uses

Materials - Properties - Uses

1	What materials are used around us? K: Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. WS: Identifying and classifying. <i>Identifying and Classifying</i>
2	What is wood, paper and cardboard used for? K: as above WS: Performing simple tests. <i>Comparative Testing</i>
3	What is brick and rock used for? K: as above WS: Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (non-statutory). <i>Identifying and Classifying</i>
4	What is glass and plastic used for? K: as above WS: Asking simple questions and recognising that they can be answered in different ways. <i>Identifying and Classifying</i>
5	What is metal used for? K: as above WS: Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (non-statutory). <i>Identifying and Classifying</i>
6	What are fabrics used for? K: as above WS: Observing closely, using simple equipment. <i>Comparative Testing</i>
7	Why are the same objects made from different materials? K: as above WS: Using their observations and ideas to suggest answers to questions. <i>Pattern Seeking</i>
8	What difference does it make if you bend, squash, twist or stretch material? K: Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. WS: Performing simple tests. <i>Comparative Testing</i>
9	What materials would be best for an umbrella? K: Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. WS: Performing simple tests; asking simple questions and recognising that they can be answered in different ways; using their observations and ideas to suggest answers to questions. <i>Comparative Testing</i>
10	How is plastic helpful and harmful? How can we reduce our plastic waste in school? K: Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. WS: Gathering and recording data to help in answering questions. <i>Research</i>

material, natural material, man-made material, smooth, rough, flexible, hard, shiny, dull, waterproof, metal, wood, plastic, glass, brick, rock, paper, cardboard, recycle

Biology: Animals, Including Humans

Offspring - Animal Survival Needs - Diet - Exercise

1	What are the different animal groups and what do they need to survive? K: Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). WS: Identifying and classifying; asking simple questions and recognising that they can be answered in different ways. <i>Identifying and Classifying</i>
2	How are the needs of humans similar or different from those of other animals? K: Describe the importance for humans of eating and exercising the right amounts of different types of food and hygiene. WS: Using their observations and ideas to suggest answers to questions. <i>Identifying and Classifying</i>
3	What happens to your body when you exercise? K: as above WS: Gathering and recording data to help in answering questions. <i>Pattern Seeking</i>
4	What is the benefit of a good diet? K: as above WS: Identifying and classifying. <i>Identifying and Classifying</i>
5	What are the benefits of good hygiene? K: as above WS: Observing closely, using simple equipment. <i>Pattern Seeking</i>
6	What is the life cycle of a human? K: Notice that animals, including humans, have offspring which grow into adults. WS: Asking simple questions and recognising that they can be answered in different ways. <i>Identifying and Classifying</i>
7	What are different life cycles for each animal group? K: Notice that animals, including humans, have offspring which grow into adults. WS: Asking simple questions and recognising that they can be answered in different ways. <i>Identifying and Classifying; Research</i>
8	Are there patterns between life cycles of different animals? K: Notice that animals, including humans, have offspring which grow into adults. WS: Identifying and classifying; using their observations and ideas to suggest answers to questions. <i>Pattern Seeking</i>

parent, offspring, animals, life cycle, humans, mammals, amphibians, reptiles, fish, birds, diet, exercise, food, carnivore, herbivore, omnivore

Biology: Plants

Plant Growth - Plant Survival Needs

1	What is similar/different about plants? K: Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. WS: Identifying and classifying; observing closely using simple equipment. <i>Identifying and Classifying</i>
2	What is a seed and a bulb? K: To observe and describe how seeds and bulbs grow into mature plants. WS: Identifying and classifying; observing closely using simple equipment. <i>Identifying and Classifying</i>
3	What do plants need to grow? K: Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. WS: Asking simple questions and recognising that they can be answered in different ways. <i>Research</i>
4	How do bulbs and seeds grow in different conditions? K: To observe and describe how seeds and bulbs grow into mature plants. WS: Performing simple tests. <i>Observing Over Time</i>
5	Do plants grow healthier in the light or dark? K: To observe and describe how seeds and bulbs grow into mature plants. WS: Asking simple questions and recognising that they can be answered in different ways; performing simple tests. <i>Observing Over Time</i>
6	In what situations do plants grow best? K: Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy; to observe and describe how seeds and bulbs grow into mature plants. WS: Using their observations and ideas to suggest answers to questions. <i>Observing Over Time</i>

seed, bulb, plant, water, light, temperature, growth, nutrients, soil, flower, stem

Biology: Living Things and Their Habitats

Alive/Dead - Habitats - Food

1	What are the habitats in our local area? K: Identify that most living things live in habitats to which they are suited and describe how different habitats provide the basic needs of different kinds of animals and plants and how they depend on each other. WS: Gathering and recording data to help in answering questions. <i>Identifying and Classifying</i>
2	What plants and animals live in polar habitats? K: Identify and name a variety of plants and animals in their habitats, including microhabitats. Identify that most living things live in habitats to which they are suited and describe how different habitats provide the basic needs of different kinds of animals and plants and how they depend on each other. WS: Using their observations and ideas to suggest answers to questions. <i>Identify and Classifying; Research</i>
3	What plants and animals live in desert habitats? K: as above WS: Using their observations and ideas to suggest answers to questions. <i>Identify and Classifying; Research</i>
4	What plants and animals live in ocean habitats? K: as above WS: Using their observations and ideas to suggest answers to questions. <i>Identify and Classifying; Research</i>
5	What plants and animals live in woodland habitats? K: as above WS: Using their observations and ideas to suggest answers to questions. <i>Identify and Classifying; Research</i>
6	What is a microhabitat? K: Identify and name a variety of plants and animals in their habitats, including microhabitats. WS: Observing closely, using simple equipment. <i>Identify and Classifying; Research</i>
7	What do animals eat and what is a food chain? K: 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. WS: Gathering and recording data to help in answering questions. <i>Identifying and Classifying</i>
8	What is the difference between living, dead and things that have not been alive? K: Explore and compare the differences between things that are living, dead and things that have not been alive. WS: Gathering and recording data to help in answering questions. <i>Identifying and Classifying</i>

deciduous trees, evergreen trees, habitats, hibernate, microhabitat, insects, food chain, diet, living, dead, alive, never alive, plant, animal

Biology: Animals, Including Humans

Nutrition - Muscles - Skeleton

1	<p>What bones are in the human body? Why is the skeleton important? K: Identify that humans and some other animals have skeletons and muscles for support, protection and movement. WS: Asking relevant questions and using different types of scientific enquiries to answer them. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. <i>Research; Identifying and Classifying</i></p>
2	<p>What bones and organs can you identify in this mammal/amphibian/ reptile/fish/bird skeleton? K: as above WS: Talk about criteria for grouping, sorting and classifying (non-statutory). <i>Pattern Seeking</i></p>
3	<p>How can animals be sorted and grouped based on their skeletons? K: as above WS: Talk about criteria for grouping, sorting and classifying (non-statutory). <i>Identifying and Classifying</i></p>
4	<p>What are the different types of joints and why are they important? K: as above WS: Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations (non-statutory). <i>Identifying and Classifying</i></p>
5	<p>What is a carnivore / herbivore / omnivore? K: 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. WS: Using straightforward scientific evidence to answer questions or to support their findings. <i>Identifying and Classifying</i></p>
6	<p>What is a balanced diet and why is it important? K: as above WS: Using straightforward scientific evidence to answer questions or to support their findings <i>Identifying and Classifying</i></p>
7	<p>Why do some people follow specific diets? K: as above WS: Identifying differences, similarities or changes related to simple scientific ideas and processes. <i>Research</i></p>

skeleton, skull, ribcage, spine, pelvis, femur, heart, lungs, brain, mammal, bird, fish, amphibian, reptile, endoskeleton, exoskeleton, hydroskeleton, joint, hinge-joint, ball-and-socket joint, muscle, bicep, tricep, contract, relax, carbohydrate, protein, dairy, fat, sugar, fruits and vegetables, fibre, balanced diet, nutrition, Eatwell Guide, vegan, vegetarian, pescatarian, omnivorous diet, herbivore, carnivore, omnivore

Physics: Light

Sight - Reflection - Shadows

1	<p>What is a light source? How can we protect our eyes from the sun? K: 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. WS: Identifying differences, similarities or changes related to simple scientific ideas and processes. <i>Identifying and Classifying</i></p>
2	<p>How can we see? (darkness, light, travelling in lines) K: Understand that darkness is the absence of light. WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. <i>Observing Over Time</i></p>
3	<p>Do all materials reflect light? K: Notice that light is reflected from surfaces. WS: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. <i>Comparative Testing</i></p>
4	<p>How are shadows formed? K: Recognise that shadows are formed when the light from a light source is blocked by an opaque object. WS: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. <i>Research; Pattern Seeking</i></p>
5	<p>If you were going to make some curtains would you want it to be opaque, translucent or transparent? K: as above WS: Asking relevant questions and using different types of scientific enquiries to answer them. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. <i>Comparative Testing</i></p>
6	<p>How does the distance between the light source and the object affect the size of a shadow? K: Find patterns in the way that the size of shadows change. WS: Setting up simple practical enquiries, comparative and fair tests. <i>Comparative Testing; Fair Testing</i></p>

light, eyes, sun, shadow, reflect, absorb, opaque, translucent, transparent

Chemistry: Rocks

Rocks - Properties - Fossils - Soils

1	<p>How can we identify and sort rocks based on their properties? K: Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. WS: Making systematic and careful observations. <i>Identifying and Classifying</i></p>
2	<p>Which rocks are permeable? K: as above WS: Making systematic and careful observations. <i>Comparative Testing</i></p>
3	<p>What buildings are made from rock in our local area? K: as above WS: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. <i>Research</i></p>
4	<p>How are fossils formed? K: Describe in simple terms how fossils are formed when things that have lived are trapped within rock. WS: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. <i>Research</i></p>
5	<p>What is soil? What are the different types of soil? K: Recognise that soils are made from rocks and organic matter. WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. <i>Pattern Seeking</i></p>
6	<p>Which soil absorbs the most water? K: as above WS: Setting up simple practical enquiries, comparative and fair tests. <i>Comparative Testing</i></p>

granite, pumice, sandstone, chalk, marble, slate, crystals, grains, layers, permeable, impermeable, texture, weathering, erosion, soil, nutrients, sandy soil, clay soil, peat soil, chalky soil, organic matter, fossil, rock, skeleton, shell, fossilisation, sediment

Physics: Forces and Magnets

Forces - Magnetic - Poles

1	<p>What is a force? K: Compare how things move on different surfaces. WS: Identifying differences, similarities or changes related to simple scientific ideas and processes. <i>Pattern Seeking</i></p>
2	<p>What type of surface has low friction? K: as above WS: Using straightforward scientific evidence to answer questions or to support their findings. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. <i>Fair Testing</i></p>
3	<p>Which magnet is the strongest? K: Notice that some forces need contact between two objects, but magnetic forces can act at a distance. WS: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. <i>Comparative Testing</i></p>
4	<p>What materials are magnetic? K: 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. WS: Identifying differences, similarities or changes related to simple scientific ideas and processes. <i>Identifying and Classifying</i></p>
5	<p>Are all metals magnetic? K: Observe how magnets attract or repel each other and attract some materials and not others. WS: Setting up simple practical enquiries, comparative and fair tests. <i>Comparative Testing</i></p>
6	<p>When will a magnet attract another magnet? K: Describe magnets as having two poles and predict whether two magnets will attract or repel each other, depending on which poles are facing. WS: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. <i>Pattern Seeking</i></p>

push, pull, force, contact force, independent variable, dependent variable, control variable, friction, smooth, rough, poles, magnetic, magnet, attract, repel, metal, iron, steel, aluminium, non-metal.

Biology: Plants

Plant Parts - Plant Survival Needs - Plant Life Cycles

1	<p>What is the function of the flowers / leaves / roots / stem? K: Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. WS: Using straightforward scientific evidence to answer questions or to support their findings. <i>Identifying and Classifying</i></p>
2	<p>Does the number of seeds within one plant pot affect the growth of the plants? K: 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. WS: Asking relevant questions and using different types of scientific enquiries to answer them. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. <i>Comparative Testing</i></p>
3	<p>How does water get to the leaves? K: Investigate the way in which water is transported within plants. WS: Setting up simple practical enquiries, comparative and fair tests. <i>Pattern Seeking</i></p>
4	<p>How long does it take for a seed to germinate? K: Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. WS: Identifying differences, similarities or changes related to simple scientific ideas and processes. <i>Comparative Testing</i></p>
5	<p>Where are the reproductive parts of a flowering plant? K: as above WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. <i>Identifying and Classifying</i></p>
6	<p>What is pollination? K: as above WS: Use relevant scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences (non-statutory). <i>Research</i></p>
7	<p>What are the ways in which seed dispersal can occur? K: as above WS: Identifying differences, similarities or changes related to simple scientific ideas and processes. <i>Research</i></p>
8	<p>What are the stages in a plant's life cycle? K: as above WS: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. <i>Identifying and Classifying</i></p>

seed, germination, pollination, seed dispersal, life cycle, wind dispersal, animal dispersal, water dispersal, explosion dispersal, pollen, stamen, pistil, eggs, pollinators, flower, petal, reproductive organs, seedling, seed coating, leaf, stem, roots, water transportation, soil

Biology: Animals, Including Humans

Digestive System - Teeth - Food Chains

1	<p>Why do animals have different types of teeth? K: Comparing the teeth of carnivores and herbivores and suggesting reasons for differences. WS: Identifying differences, similarities or changes related to simple scientific ideas and processes. Pattern Seeking</p>
2	<p>Why do humans have different types of teeth? K: Identify the different types of teeth in humans and their simple functions. WS: Asking relevant questions and use different types of scientific enquiries to answer them. Pattern Seeking</p>
3	<p>What is a food chain? How does human activity affect food chains? K: Construct and interpret a variety of food chains, identifying producers, predators and prey. WS: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Identifying and Classifying</p>
4	<p>What do teeth tell you about an animal's place in the food chain? K: as above WS: Comparing the teeth of carnivores and herbivores, and suggesting reasons for differences. Identifying and Classifying</p>
5	<p>What is enamel and why is it important? K: Identify the different types of teeth in humans and their simple functions. WS: Setting up simple practical enquiries, comparative and fair tests. Identifying and Classifying</p>
6	<p>What effect do sugary foods and liquids have on enamel? K: as above WS: Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Comparative Testing</p>
7	<p>What are the different parts of the digestive system? K: Describe the simple functions of the basic parts of the digestive system in humans. WS: Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations. Research</p>
8	<p>How does the digestive system work? K: as above WS: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Identifying and Classifying</p>

teeth, carnivore, herbivore, omnivore, incisors, premolar, molar, canine, germ, enamel, root, plaque, decay, digestive system, oesophagus, stomach, rectum, intestine, saliva, mouth, good chain, producer, consumer, predator, prey, farming, overfishing, hunting

Physics: Electricity

Simple Circuits - Conduction

1	<p>What is electricity? K: Identify common appliances that run on electricity. WS: Talk about criteria for grouping, sorting and classifying. Identifying and Classifying</p>
2	<p>What is the role of each part in the circuit? K: Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Identifying and Classifying</p>
3	<p>Why is each part of a circuit important? K: 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. WS: Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Pattern Seeking</p>
4	<p>What materials are conductors or insulators of electricity and is there a pattern? K: Recognise some common conductors and insulators, and associate metals with being good conductors. WS: Asking relevant questions and using different types of scientific enquiries to answer them. Identifying and Classifying</p>
5	<p>Why are conductors and insulators used? K: as above WS: Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Comparative Testing</p>
6	<p>What is renewable energy? K: - WS: Asking relevant questions and using different types of scientific enquiries to answer them. Research</p>

appliances, plug, socket, cell, electrocuted, circuit, switch, battery, buzzer, conductor, insulator, metal, material

Biology: Living Things and Their Habitats

Grouping - Classification - Environments

1	<p>What plants live in our local area? K: Recognise that living things can be grouped in a variety of ways. WS: Asking relevant questions and using different types of scientific enquiries to answer them. Identifying and Classifying</p>
2	<p>How can these animals be classified? K: Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. WS: Gathering, recording, classifying and presenting data in a variety of ways, to help in answering questions. Pattern Seeking</p>
3	<p>How can these plants be classified? K: Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. WS: Gathering, recording, classifying and presenting data in a variety of ways, to help in answering questions. Identifying and Classifying</p>
4	<p>How can living things be grouped and classified? K: Recognise that living things can be grouped in a variety of ways. WS: Asking relevant questions and using different types of scientific enquiries to answer them. 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. Identifying and Classifying</p>
5	<p>What negative impacts do humans have on the environment? K: Recognise that environments can change, and that this can sometimes pose dangers to living things. WS: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Research</p>
6	<p>What positive impacts do humans have on the environment? K: Recognise that environments can change, and that this can sometimes pose dangers to living things. WS: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Research</p>

mammal, bird, reptile, amphibian, fish, vertebrate, invertebrate, insect, exoskeleton, habitat, urban habitat, rural habitat, biodiversity, classification key, flowering plant, non-flowering plant, rewilding, deforestation, natural resources, nature reserve

Physics: Sound

Vibration - Pitch - Volume

1	<p>How do we hear sounds? K: Identify how sounds are made, associating some of them with something vibrating. WS: Asking relevant questions and using different types of scientific enquiries to answer them. Research</p>
2	<p>How does the ear help us hear? K: Recognise that vibrations from sounds travel through a medium to the ear. WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Pattern Seeking</p>
3	<p>How is sound measured? K: Identify how sounds are made, associating some of them with something vibrating. WS: Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Comparative Testing</p>
4	<p>How can you increase the volume of a sound? K: Find patterns between the volume of a sound and the strength of the vibrations that produced it. WS: Setting up simple practical enquiries, comparative and fair tests. Fair Testing</p>
5	<p>What is pitch? K: Find patterns between the pitch of a sound and features of the object that produced it. WS: Identifying differences, similarities or changes related to simple scientific ideas and processes. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment [pitch]. Pattern Seeking</p>
6	<p>How does the distance from the sound source affect the volume of the sound? K: Recognise that sounds get fainter as the distance from the sound source increases. WS: Setting up simple practical enquiries, comparative and fair tests. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Fair Testing</p>

vibration, ear, sound, volume, pitch, decibel, decibel metre, insulate, high-pitched, low-pitched, ear, conclusion

Chemistry: States of Matter

States - Changing States - Water Cycle

1	<p>What are the properties of solids, liquids and gases? K: Compare and group materials together, according to whether they are solids, liquids or gases. WS: Identifying differences, similarities or changes related to simple scientific ideas. Identifying and Classifying</p>
2	<p>Which materials are more difficult to categorise as solids, liquids or gases? K: as above WS: Identifying differences, similarities or changes related to simple scientific ideas. Identifying and Classifying</p>
3	<p>How can a material change state? K: 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). WS: Asking relevant questions and using different types of scientific enquiries to answer them. Observing Over Time</p>
4	<p>How can a material change state? K: as above WS: Asking relevant questions and using different types of scientific enquiries to answer them. Observing Over Time</p>
5	<p>How does the temperature of the water affect the time it takes for ice to melt? K: as above WS: 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. Comparative Testing</p>
6	<p>What is the water cycle? K: Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. WS: Identifying differences, similarities or changes related to simple scientific ideas and processes. Research</p>
7	<p>What effect does temperature have on the rate of evaporation? K: as above WS: Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Fair Testing</p>

solid, liquid, gas, volume, states of matter, pouring solid, flow, freezing, melting, boiling, evaporating, condensing, thermometer, stopwatch, temperature, independent variable, controlled variable, controlled, melting point, the water cycle, precipitation, atmosphere, global warming, water vapour, data

Physics: Forces

Gravity - Resistance - Mechanisms

1	<p>What are forces and friction? K: Identify the effects of air resistance, water resistance and friction that acts between moving surfaces. WS: Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas (non-statutory). Comparative Testing</p>
2	<p>What is air resistance? K: Identify the effects of air resistance. WS: Recognise which secondary sources will be most useful to research their ideas. Research</p>
3	<p>Does the surface area of a parachute affect how long it takes for it to fall to the ground? K: Identify the effects of air resistance. WS: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Fair Testing</p>
4	<p>Does the surface area of a parachute affect how long it takes for it to fall to the ground? K: Identify the effects of air resistance. WS: Using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Comparative Testing</p>
5	<p>Does the surface area of a parachute affect how long it takes for it to fall to the ground? K: Identify the effects of air resistance. WS: Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results. Fair Testing</p>
6	<p>How can water resistance be reduced? K: Identify the effects of water resistance. WS: Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Comparative Testing</p>
7	<p>How can water resistance be reduced? K: Explain that unsupported objects fall towards the Earth because of gravity acting between the Earth and the falling object. WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Pattern Seeking</p>
8	<p>How do levers, pulleys and gears work to allow a smaller force to have a greater effect? K: Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. WS: Recognise which secondary sources will be most useful to research their ideas (non-statutory). Research</p>

force, friction motion, air resistance, drag, friction. water resistance, gear, pulley, lever, precision, repeatability, streamline, variable types, anomalous results, weight, contact/non contact force, machine

Physics: Earth and Space

Solar System - Orbit - Day / Night

1	<p>How have ideas about the Solar System changed over time? K: Describe the Sun, Earth and Moon as approximately spherical bodies. WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Research</p>
2	<p>What is similar about the first four planets? What is different? K: Describe the Sun, Earth and Moon as approximately spherical bodies. WS: Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas and should talk about how scientific ideas have developed over time (non-statutory). Pattern Seeking</p>
3	<p>What do Earth and the other planets in the Solar System orbit? K: Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. WS: Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (distance from Sun vs. orbit time). Comparative Testing</p>
4	<p>What is the result of the Earth's spinning on its axis? K: Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Observing Over Time</p>
5	<p>How is the moon able to orbit the earth? K: Describe the movement of the Moon relative to the Earth. WS: Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. Pattern Seeking</p>

solar system, orbit, Sun, planet, moon, celestial body, planet names, heliocentric, geocentric, model, pole, axis, rotate, night, day

Chemistry: Properties and Changes of Materials

Properties - Dissolving - Separation - Reversibility

1	<p>How can we compare everyday materials? K: Compare and group together everyday materials on the basis of their properties, including their hardness, transparency and response to magnets. Give reasons based on comparative and fair tests for the particular use of everyday materials, including metals, woods and plastics. WS: Use and develop keys and other information records to identify, classify and describe living things and materials. Pattern Seeking</p>
2	<p>How can we compare electrical conductivity and insulation? K: Compare and group together everyday materials on the basis of their properties including their electrical conductivity. WS: Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Comparative Testing</p>
3	<p>How can we compare the thermal insulation of materials? K: Compare and group together everyday materials on the basis of their properties, including their thermal conductivity. WS: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Fair Testing</p>
4	<p>Which material is the best insulator of heat? K: as above WS: Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Comparative Testing</p>
5	<p>How can you tell if a substance has dissolved in a liquid? K: Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. WS: Using test results to make predictions to set up further comparative and fair tests. Fair Testing</p>
6	<p>How can you separate materials? K: Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. WS: Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Pattern Seeking</p>
7	<p>How can you describe changes to materials? K: 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. WS: Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas. Identifying and Classifying</p>

properties, wood, metal, transparent, translucent, opaque, hardness, magnetism, conductor, insulator, circuit, cell bulb, variables, dissolve, evaporate, reversible, irreversible, soluble, insoluble, substance, solution, mixture, solid, liquid, gas, filter, sieve

Biology: Living Things and Their Habitats

Life Cycles - Reproduction

1	<p>How are the life cycles of animals similar and how are they different? K: Describe the differences in the life cycles of a 1) mammal, an amphibian, 2) an insect and a bird. WS: Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas. Identify and Classify</p>
2	<p>What is sexual reproduction? K: Describe the life process of reproduction in some plants and animals. WS: Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas (non-statutory). Pattern Seeking</p>
3	<p>How do plants reproduce sexually? K: Describe the life process of reproduction in some plants and animals. 1) Parts/2 Pollination WS: Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. Pattern Seeking</p>
4	<p>How do plants reproduce asexually? K: Describe the life process of reproduction in some plants and animals. WS: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Observing Over Time</p>
5	<p>Which plant cutting produces the tallest plant? K: Describe the life process of reproduction in some plants and animals. WS: Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Observing Over Time</p>

monotreme, mammal, sexual/asexual reproduction, metamorphosis, tadpole, froglet, frogspawn, larva, pupa, chrysalis, insect, bird nestling, fledgling, embryo, sperm cell, fertilisation, flower parts, pollination, runner tuber, clone, cutting, variables

Biology: Animals, Including Humans

Life Cycles - Changes

1	<p>What are the stages of the human life cycle? K: Describe the changes as humans develop to old age. WS: Reporting and presenting findings from enquiries. Research</p>
2	<p>How do babies develop? K: Describe the changes as humans develop to old age. WS: Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Pattern Seeking</p>
3	<p>What changes take place during adolescence? K: Describe the changes as humans develop to old age. WS: Reporting and presenting findings from enquiries including conclusions and casual relationships. Identifying and Classifying</p>
4	<p>How do adults change as they age? K: Describe the changes as humans develop to old age. WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Identifying and Classifying</p>
5	<p>How long are the gestation periods of different mammals? K: Describe the changes as humans develop to old age. WS: Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Pattern Seeking</p>
6	<p>Is there a relationship between the gestation period of an animal and its lifespan? K: Describe the changes as humans develop to old age. WS: Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Research</p>

adolescent, baby foetus, life cycle adult, gestation, elderly, milestone, toddler, womb,, baby, child, period, puberty, hormone, reproduce, life expectancy, mammal, gestation, offspring, correlation and anomaly

Physics: Light

Sight - Light Travel - Shadows

1	What is a light source? K: 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. WS: Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas (non-statutory). Research
2	What does 'reflection' mean? K: 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. WS: Recording data and results of increasing complexity using scientific diagrams and labels , classification keys, tables, scatter graphs, bar and line graphs. Comparative Testing
3	How does light travel? K: Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. WS: Recording data and results of increasing complexity using scientific diagrams and labels , classification keys, tables, scatter graphs, bar and line graphs. Experiment: How does the distance from a light source affect the size of the shadow? Pattern Seeking
4	How does the distance from a light source affect the size of the shadow? K: as above WS: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Fair Testing
5	How does the distance from a light source affect the size of the shadow? K: as above WS: Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Fair Testing
6	How does the distance from a light source affect the size of the shadow? K: as above WS: Recording data and results of increasing complexity using scientific diagrams and labels , classification keys, tables, scatter graphs, bar and line graphs. Fair Testing
7	Why does a pencil look bent when you put it in a glass of water? K: Recognise that light appears to travel in straight lines. WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Research

Physics: Electricity

Circuits - Components - Symbols

1	What is the symbol that represents a bulb / cell? K: Use recognised symbols when representing a simple circuit in a diagram. WS: Recording data and results of increasing complexity using scientific diagrams and labels , classification keys, tables, scatter graphs, bar and line graphs. Comparative Testing
2	What happens to the current in an incomplete circuit? K: 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. WS: Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. Fair Testing
3	Why does a bulb's brightness or a buzzer's volume decrease when more components are added to the circuit? K: as above WS: Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables , scatter graphs , bar and line graphs. Comparative Testing
4	How does the voltage in a circuit affect the loudness of a buzzer? K: Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. WS: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Comparative Testing
5	How does the voltage in a circuit affect the loudness of a buzzer? K: as above WS: Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Comparative Testing
6	How does the voltage in a circuit affect the loudness of a buzzer? K: as above WS: Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables , scatter graphs, bar and line graphs . Using test results to make predictions to set up further comparative and fair tests. Comparative Testing

*series circuit, cell, battery, bulb, current,***Biology: Living Things and Their Habitats**

Classification - Microorganisms/Plants/Animals

1	What do animals / plants need to survive? K: Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Identifying and Classifying
2	How can animals, plants and microorganisms be identified, grouped and classified? K: as above WS: Use and develop keys and other information records to identify, classify and describe living things (non-statutory). Identifying and Classifying
3	What are classification keys? K: Give reasons for classifying plants and animals based on specific characteristics. WS: Use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment (non-statutory). Identifying and Classifying
4	What are the differences between deciduous and evergreen trees? K: as above WS: Recording data and results of increasing complexity using scientific diagrams and labels, classification keys , tables, scatter graphs, bar and line graphs. Identifying and Classifying
5	What is a microorganism? K: Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Identifying and Classifying
6	How are bacteria, viruses and fungi different? K: as above WS: Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. Research
7	Why did Linnaeus create a classification system? K: as above WS: Use relevant scientific language and illustrations to discuss, communicate and justify their ideas and should talk about how scientific

Biology: Evolution and Inheritance

Evolution - Offspring - Adaptation

1	What are offspring? K: Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. WS: Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas (non-statutory). Research
2	What is inheritance? K: as above WS: Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Fair Testing
3	How do the characteristics of animals allow them to survive in their habitat? K: Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. WS: Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact (non-statutory). Pattern Seeking
4	What kind of plants live in a desert habitat? K: as above WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Research
5	Why is evolution important for animals and plants? K: as above WS: Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact (non-statutory). Pattern Seeking
6	Is the type of food a bird eats related to the shape of its beak? K: as above WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Comparative Testing
7	What do fossils tell us about the past? K: Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Research
8	How have fossils changed over time and does this provide evidence for evolution? K: as above WS: Use relevant scientific language and

Biology: Animals, Including Humans

Circulatory System - Diet and Lifestyle

1	What is the circulatory system and how does it work? K: Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Describe the ways in which nutrients and water are transported within animals, including humans. WS: Explore ideas and raise different kinds of questions (non-statutory). Research
2	What is the circulatory system and how does it work? K: as above WS: Explore ideas and raise different kinds of questions (non-statutory). Fair Testing
3	What is a balanced diet? K: Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. WS: Identifying scientific evidence that has been used to support or refute ideas or arguments. Research
4	Why are some drugs legal and others are illegal? K: as above WS: Recognise which secondary sources will be most useful to research their ideas and begin the separate opinion from fact (non-statutory). Research
5	How is it possible to become addicted to smoking/vaping? K: as above WS: Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact (non-statutory). Research

heart, circulatory system, blood vessel, veins, arteries, capillaries, red blood cell, white blood wells, lungs, nutrients, plasma, oxygen, atria, ventricles, right atrium, right ventricle, left atrium, left ventricle, oxygenated blood, deoxygenated blood, balanced diet, calories, unsaturated fats, saturated fats, drug, painkiller, stimulants, depressants, cigarette, vape, tar, nicotine, carbon monoxide, addiction,

	<p>8 How are rainbows formed? K: as above WS: Talk about how scientific ideas have changed over time (non-statutory). Research</p>	<p><i>voltage, complete circuit, incomplete circuit, switch, buzzer</i></p>	<p>ideas have developed over time. (non-statutory) Research</p>	<p>illustrations to discuss, communicate and justify their scientific ideas and should talk about how scientific ideas have developed over time (non-statutory). Research</p>	
	<p><i>light source, retina, iris, pupil, lens, light source, reflection, ray diagram, angle, periscope, shadow, opaque, translucent, transparent, solar eclipse, refraction, medium, transparent, lens, rainbow, prism, coloured filter, spectrum of light</i></p>		<p><i>organism, excretion, reproduction, living, non-living, vertebrate, invertebrate, flowering plant, non-flowering plant, classification key, mollusc, arachnid, invertebrate, deciduous tree, evergreen tree, coniferous tree, organism, microorganism, bacteria, virus, fungi, characteristics</i></p>	<p><i>fossil, rock, decompose, skeleton, Charles Darwin, evolution, palaeontologist, adaptation, habitat, natural selection, species, theory, characteristics</i></p>	