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|  | Year 3 / 4 | Objectives | Working scientifically |
| Autumn 1 | Forces and magnets  How forces are made  Gravity  Magnetism | \*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. | During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: \*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. |
| Autumn 2 | States of matter  Solids  Liquids  Gases  Heating  Cooling  Evaporation  Condensation | \*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. |
| Spring 1 | Sound  How sounds are made  Sources of sound  How sound travels  Pitch  Volume | \*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. | During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: \*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. |
| Spring 2 | Plants  How seeds grow  What plants need  Compare conditions | \*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. |
| Summer 1 | Animals including humans | \*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. |
| Summer 2 | Nutrition  Skeleton  Key bones | \*Identify that humans and some other animals have skeletons and muscles for support, protection and movement. |

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|  | Year 3 / 4 | Objectives | Working scientifically |
| Autumn 1 | Living things and habitats  Living and non-living  Properties | \*Recognise that living things can be grouped in a variety of ways.  \*Recognise that environments can change and that this can sometimes pose dangers to living things. | During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: \*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. |
| Autumn 2 | Animals including humans  Basic needs  Exercise  Offspring | \*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. |
| Spring 1 | Rocks  Physical processes  Compare rocks  Rock formation (igneous, sedimentary)  Fossils | \*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. |
| Spring 2 | 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. | During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: \*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. |
| Summer 1 | Light | \*Recognise that they need light in order to see things and that dark is the absence of 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 an opaque object.  \*Find patterns in the way that the size of shadows change. |
| Summer 2 | Habitats  Needs of animals and environments | \*Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. | During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: \*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. |