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|  | Year 3 / 4 | Objectives | Working scientifically  |
| Autumn 1 | Forces and magnetsHow forces are madeGravityMagnetism  | \*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 matterSolidsLiquidsGasesHeatingCoolingEvaporationCondensation  | \*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 madeSources of soundHow sound travelsPitchVolume  | \*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 growWhat plants needCompare 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-livingProperties | \*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 needsExerciseOffspring  | \*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 | RocksPhysical processesCompare rocksRock 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 | HabitatsNeeds 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. |