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| **Working scientifically****School logo** | 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.
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| BIOLOGY | **Plants*** (3) identify and describe the functions of different parts of flowering plants: roots, stem/trunk leaves and flowers
* (3) 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* (3) investigate the way in which water is transported within plants
* (3) explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

**Animals, including human*** (3) 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* (3) identify that humans and some other animals have skeletons and muscles for support, protection and movement.
* (4) describe the simple functions of the basic parts of the digestive system in humans
* (4) identify the different types of teeth in humans and their simple functions.
* (4) construct and interpret a variety of food chains, identifying producers, predators and prey

**Living things and their habitats*** (4) recognise that living things can be grouped in a variety of ways
* (4) explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
* (4) recognise that environments can change and that this can sometimes pose dangers to living things

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| CHEMISTRY | **Rocks*** (3) compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
* (3) describe in simple terms how fossils are formed when things that have lived are trapped within rock.
* (3) recognise that soils are made from rocks and organic matter

**States of matter*** (4) compare and group materials together, according to whether they are solids, liquids or gases
* (4) 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)* (4) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
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| PHYSICS | **Electricity*** (4) identify common appliances that run on electricity
* (4) construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
* (4) 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* (4) recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
* (4) recognisesome common conductors and insulators, and associate metals with being good conductors

 **Forces and magnets*** (3) compare how things move on different surfaces
* (3) notice that some forces need contact between two objects but magnetic forces can act at a distance
* (3) observe how magnets attract or repel each other and attract some materials and not others
* (3) 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 * (3) describe magnets as having two poles
* (3) predict whether two magnets will attract or repel each other, depending on which poles are facing

**Light*** (3) recognise that they need light in order to see things and that dark is the absence of light
* (3) notice that light is reflected from surfaces
* (3) recognise that light from the sun can be dangerous and that there are ways to protect their eyes
* (3) recognise that shadows are formed when the light from a light source is blocked by a solid object
* (3) find patterns in the way that the size of shadows changes
* **Sound**
* (4) identify how sounds are made, associating some of them with vibrating
* (4) recognise that vibrations from sounds travel through a medium to the ear
* (4) find patterns between the pitch of a sound and features of the object that produced it
* (4) find patterns between the volume of a sound and the strength of the vibrations that produced it.
* (4) recognise that sounds get fainter as the distance from the sound source increases
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Year 3 and 4 Science Curriculum