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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. |
| 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 |
| 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. |
| 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