

Year 4 Curriculum subject plan Science

| YEAR 4 | Digestive system & teeth | Food chains | All living things | States of matter | Sound | Electricity |
|----------------------------|---|-------------|-------------------|------------------|-------|-------------|
| Component Knowledge | <ul style="list-style-type: none"> • Recognise that living things can be grouped in a variety of ways. • Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. • Recognise that environments can change and that this can sometimes pose dangers to living things • 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. • 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. • 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. • 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. <p>Working Scientifically:</p> <ul style="list-style-type: none"> • The children consider their prior knowledge when asking questions. They independently use a range of question stems. Where appropriate, they answer these questions. • The children answer questions posed by the teacher. | | | | | |

- Given a range of resources, the children decide for themselves how to gather evidence to answer the question. They recognise when secondary sources can be used to answer questions that cannot be answered through practical work. They identify the type of enquiry that they have chosen to answer their question
- The children make systematic and careful observations.
- They use a range of equipment for measuring length, time, temperature and capacity. They use standard units for their measurements.
- The children select from a range of practical resources to gather evidence to answer questions generated by themselves or the teacher.
- They follow their plan to carry out: observations and tests to classify; comparative and simple fair tests; observations over time; and pattern seeking.
- The children sometimes decide how to record and present evidence. They record their observation e.g. using photographs, videos, pictures, labelled diagrams or writing. They record their measurements e.g. using tables, tally charts and bar charts (given templates, if required, to which they can add headings). They record classifications e.g. using tables, Venn diagrams, Carroll diagrams.
 - Children are supported to present the same data in different ways in order to help with answering the question.
 - Children answer their own and others' questions based on observations they have made, measurements they have taken or information they have gained from secondary sources. The answers are consistent with the evidence.
 - Children interpret their data to generate simple comparative statements based on their evidence. They begin to identify naturally occurring patterns and causal relationships.
 - They draw conclusions based on their evidence and current subject knowledge.
 - They identify ways in which they adapted their method as they progressed or how they would do it differently if they repeated the enquiry.
 - Children use their evidence to suggest values for different items tested using the same method e.g. the distance travelled by a car on an additional surface.
 - Following a scientific experience, the children ask further questions which can be answered by extending the same enquiry.
 - They communicate their findings to an audience both orally and in writing, using appropriate scientific vocabulary.