



## Year 4 Science Skills Progression

### Year 4 Expectations: Life and Living Processes -Biology

- Identify and describe the simple functions of the basic parts of the human digestive system
- Describe the simple functions of the organs of the human digestive system
- Identify the different types of human teeth and their simple functions
- Construct and interpret a variety of food chains, identifying producers, predators and prey
- 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 this can sometimes pose dangers to living things

### Exceeding Expectations

- Explain how people, weather and the environment can affect living things
- Explain how certain living things depend on one another to survive



## Year 4 Science Skills Progression

### Year 4 Expectations: Working Scientifically

- Ask relevant questions and use different types of scientific enquiries to answer them
- Set up simple practical enquiries, comparative and fair tests
- Decide which information needs to be collected and decide which is the best way for collecting it
- Take measurements using different equipment and units of measure and record what they have found in a range of ways
- Make accurate measurements using standard units
- Explain their findings in different ways, for example, display, presentation, writing
- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Make predictions based on something they have found out
- Record and present what they have found using scientific language, drawings, labelled diagrams, keys, bar charts and tables

### Exceeding Expectations

- Plan and carry out scientific enquiry by controlling variables fairly and accurately
- Use test results to make further predictions and set up further comparative tests
- Record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models
- Report findings from scientific enquiries through written explanations and conclusions



## Year 4 Science Skills Progression

### Year 4 Expectations: Physical Processes -Physics

- 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

### Exceeding Expectations

- Recognise if all metals are conductors of electricity
- Work out which metals can be used to connect across a gap in a circuit



## Year 4 Science Skills Progression

### Year 4 Expectations: Materials -Chemistry

- 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 ( $^{\circ}\text{C}$ )
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

### Exceeding Expectations:

- Group and classify a variety of materials according to the impact of temperature on them
- Relate temperature to change of state of materials