### Science Progression of skills Year 4

## National Curriculum objectives: In this unit, children will be taught to:

Lower KS2 Working Scientifically Pupils will be taught to use the following practical scientific methods, processes and skills:

- WS1 making decisions, asking relevant questions and using different types of scientific enquiries to answer them
- WS2 setting up simple practical enquiries, comparative and fair tests
- WS3 making systematic and careful observations using notes and simple tables
- WS4 taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- WS5 gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- WS6 recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- WS7 reporting on findings from enquiries, using relevant scientific language, including oral and written explanations, displays or presentations of results and conclusions
- WS8 using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- WS9 identifying differences, patterns, similarities or changes related to simple scientific ideas and processes
- WS10 using straightforward scientific evidence to answer questions or to support their findings.
- WS11 begin to look for naturally occurring patterns and relationships
- WS12 recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.

## **Living things and their Habitats**

- LH1 recognise that living things (including those in the locality) can be grouped in a variety of ways
- LH2 explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- LH3 recognise that environments can change and that this can sometimes pose dangers to living things.

# **Animals including Humans**

- AH1 describe the simple functions of the basic parts of the digestive system in humans
- AH2 identify the different types of teeth in humans and their simple functions
- AH3 construct and interpret a variety of food chains, identifying producers, predators and prey.

### **States of Matter**

- SM1 explore a variety of everyday materials and develop simple descriptions of the states of matter
- SM2 compare and group materials together, according to whether they are solids, liquids or gases
- SM3 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)
- SM4 identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

### Sound

- S1 identify how sounds are made, associating some of them with something vibrating
- S2 recognise that vibrations from sounds travel through a medium to the ear

- S3 find patterns between the pitch of a sound and features of the object that produced it
- S4 find patterns between the volume of a sound and the strength of the vibrations that produced it
- S5 recognise that sounds get fainter as the distance from the sound source increases.

## **Electricity**

- E1 identify common appliances that run on electricity
- E2 construct a simple series circuit, identifying/naming its basic parts, including cell, wire, bulb, switch and buzzer
- E3 use their circuits to create simple devices
- E4 draw the circuit as a pictorial representation (not necessarily using conventional circuit symbols)
- E5 about precautions for working safely with electricity.
- E6 identify whether or not a lamp will light in a simple series circuit/
- E7 recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- E8 recognise some common conductors and insulators, and associate metals with being good conductors.