#### Living things and their habitats

#### The children will be taught:

- that living things are grouped based on common observable features, behaviours and on similarities and differences
- about the classification system created by Carl Linnaeus
- about the animal kingdom (vertebrates and invertebrates) and plant kingdom (flowering and non-flowering plants)
- to classify and group animals and plants found in the school environment
- about micro-organism (fungi, algae, bacteria and viruses)
- how to interpret and construct branching keys.

#### **Evolution and inheritance**

#### The children will be taught:

- how a fossil is created and why they are found only in sedimentary rocks
- how palaeontologists help us understand the past
- what the terms inheritance and variation mean
- that all animals and plants produce offspring of the same kind and that there are similarities and differences between them
- what the terms adaptation and evolution mean
- how animals or plants adapt to suit their environment
- that variation and adaption can cause a species to evolve.

#### Light

# The children will be taught:

- that light travels in straight lines
- to represent the direction of light using arrows
- what happens to light rays in water
- about the angle of incidence and reflection
- that they are able to see non-luminous objects because light reflects into their eyes
- how to draw diagrams to show how they see non-luminous objects
- how they are able to see objects around a corner or behind them
- why shadows occur
- how the size and clarity of a shadow can be changed.

### **Animals including humans**

# The children will be taught:

- the order that blood circulates around the body
- about the basic structure and function of the heart, arteries, veins and blood cells
- about the impacts of lifestyle choices on the function of the heart
- how to find out nutritional values of the food they eat and how nutrients and water are transported through the body
- about helpful and harmful drugs and how they affect the body.

# Electricity

# The children will be taught:

- about short circuits and how to stay safe when using electricity
- to construct series circuits and name components used accurately
- how to use circuit diagram symbols to draw circuits
- how to read the voltage of a battery and what this means
- how to investigate how the number of components and cells, or voltage of cells used can change the brightness of a bulb or speed of a motor.

# **Working scientifically.** The children will have the opportunity to:

- plan different types of scientific enquiries to answer questions
- take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- use test results to make predictions to set up further comparative and fair tests
- report and present findings from enquiries, including conclusions, causal relationships and explanations in oral and written forms such as displays and other presentations
- identify scientific evidence that has been used to support or refute ideas or arguments.