



## Science

### By the end of Year 6 children should be able to

#### Living Things

Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals

Give reasons for classifying plants and animals based on specific characteristics

#### Animals

Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood

Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function

Describe the ways in which nutrients and water are transported within animals, including humans

#### Evolution

Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago

Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents

Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution

#### Light

Recognise that light appears to travel in straight lines

Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye

Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes

Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them

#### Electricity

Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit

Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches

Use recognised symbols when representing a simple circuit in a diagram

#### Working Scientifically

Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary

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 and more independently using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs

Use test results to independently make predictions to set up further comparative and fair tests and suggesting reasons for predictions

Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, 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 through research, debates and presenting their ideas