

Year 6 Programme of study

Working Scientifically

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting 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
- identifying scientific evidence that has been used to support or refute ideas or arguments.

Year 6 Programmes of Study (statutory Requirements)

Living things and their habitats

Pupils should be taught to:

- describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals
- give reasons for classifying plants and animals based on specific characteristics.

Evolution and inheritance

NB - At this stage, children are not expected to understand how genes and chromosomes work.

Pupils should be taught to:

- 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.

Upper KS2 Programmes of study

Animals including humans	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">□ 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.
Light	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">□ 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.□ Predict the size of shadows when the position of the light source changes.
Electricity	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">□ 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.