



## Year 6 Science Skills Progression

### Year 6 Expectations: 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 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 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

### Exceeding Expectations

- Use information from different sources to answer a question and plan a scientific enquiry
- Make a prediction which links with other scientific knowledge
- Plan in advance which equipment they will need and use it well
- Link their conclusions to other scientific knowledge



## Year 6 Science Skills Progression

### Year 6 Expectations: Life and Living Processes - Biology

- 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
- 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
- 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

### Exceeding Expectations:

- Explain how some living things adapt to survive in extreme conditions
- Analyse the advantages and disadvantages of specific adaptations, such as being on two rather than four feet
- Begin to understand what is meant by DNA
- Readily group animals into reptiles, fish, amphibians, birds and mammals
- Make a diagram of the human body and explain how different parts work and depend on one another
- Compare the organ systems of humans to other animals



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### Year 6 Expectations: Physical Processes -Physics

- 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
- 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

### Exceeding Expectations:

- Explain the danger of short circuits and what a fuse is
- Use the ray model to explain the size of shadows