



### **Working scientifically**

The pupil can, using appropriate scientific language from the national curriculum:

- describe and evaluate their own and others' scientific ideas related to topics in the national curriculum (including ideas that have changed over time), using evidence from a range of sources
- ask their own questions about the scientific phenomena that they are studying, and select the most appropriate ways to answer these questions, recognising and controlling variables where necessary (i.e. observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests, and finding things out using a wide range of secondary sources)
- use a range of scientific equipment to take accurate and precise measurements or readings, with repeat readings where appropriate
- record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- draw conclusions, explain and evaluate their methods and findings, communicating these in a variety of ways
- raise further questions that could be investigated, based on their data and observations.

### **Science Content**

- describe and compare different reproductive processes and life cycles in animals
- name, locate and describe the functions of the main parts of plants, including those involved in reproduction
- group and identify materials in different ways according to their properties, based on first-hand observation; and justify the use of different everyday materials for different uses, based on their properties
- identify and describe what happens when dissolving occurs in everyday situations; and describe how to separate mixtures and solutions into their components
- identify, with reasons, whether changes in materials are reversible or not
- describe the effects of simple forces that involve contact (air and water resistance, friction) and gravity
- identify simple mechanisms, including levers, gears and pulleys, that increase the effect of a force
- describe the shapes and relative movements of the Sun, Moon, Earth and other planets in the solar system; and explain the apparent movement of the sun across the sky in terms of the Earth's rotation and that this results in day and night