

Year 5 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

Properties and changes of materials

Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets

Know that some materials will dissolve in liquid to form a solution

Describe how to recover a substance from a solution

Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating

Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic

Demonstrate that dissolving, mixing and changes of state are reversible changes

Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda

Forces

Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object

Identify the effects of air resistance, water resistance and friction, that act between moving surfaces

Recognise that some mechanisms including levers, pulleys and gears, allow a smaller force to have a greater effect

Earth and Space

Describe the movement of the Earth, and other planets, relative to the Sun in the solar system

Describe the movement of the Moon relative to the Earth

Describe the Sun, Earth and Moon as approximately spherical bodies

Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky

Living things and their habitats and Animals including humans

Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird

Describe the life process of reproduction in some plants and animals

Describe the changes as humans develop to old age