

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, casual 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

Vocabulary: relevant, scientific enquiry, comparative and fair tests, systematic and careful observation, accurate measurements, standard units, equipment, thermometers, data loggers, record, classify, labelled diagram, key, bar chart, table, results, conclusions, predictions, improvements, differences, similarities, changes, processes, scientific evidence, exploring, relationships/patterns, interactions, variables, classification keys, scatter graphs, bar graphs, line graphs

Forces

- explain that unsupported objects fall towards the Earth because of the force of gravity acting between 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

Living Things & their Habitats

- describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- describe the life processes of reproduction in some plants and animals

Vocabulary: life cycle, mammal, amphibian, insect, bird, reproduction, asexual reproduction, sexual reproduction, seeds, stem, root cuttings, tubers, bulbs

Y5 Science

Properties & 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, and 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 plastics
- 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

Vocabulary: properties, hardness, solubility, transparency, conductivity, electrical, thermal, magnetic force, dissolve, solution, substance, melting, solids, liquids, gases, separated, filtering, sieving, evaporating, condensing, changes of state, reversible, irreversible, acid, bicarbonate of soda, burning, rusting, chemical change

Animals, including humans

- describe the changes as humans develop to old age

Vocabulary: growth, development, puberty, gestation

Earth & 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

Vocabulary: movement, Earth, Sun, Moon, solar system, spherical body, rotation, star, planet (8 planets - Pluto 'dwarf' planet since 2006), orbit

Vocabulary: force, gravity, object, air resistance, water resistance, friction, mechanisms, levers, pulleys, gears,