Primary Stage 6 Science for Year 6

Scientific enquiry

Ideas and evidence

- Consider how scientists have combined evidence from observation and measurement with creative thinking to suggest new ideas and explanations for phenomena.
- Collect evidence and data to test ideas including predictions.

Plan investigative work

- Discuss how to turn ideas into a form that can be tested.
- Make predictions using scientific knowledge and understanding.
- Choose what evidence to collect to investigate a question, ensuring that the evidence is sufficient.
- Identify factors that are relevant to a particular situation.
- Choose which equipment to use.

Obtain and present evidence

- Make a variety of relevant observations and measurements using simple apparatus correctly.
- Decide when observations and measurements need to be checked by repeating to give more reliable data.
- Use tables, bar charts and line graphs to present results.

Consider evidence and approach

- Make comparisons.
- Evaluate repeated results.
- Identify patterns in results and results that do not appear to fit the pattern.
- Use results to draw conclusions and to make further predictions.
- Suggest and evaluate explanations for predictions using scientific knowledge and understanding and communicate these clearly to others.
- Say if and how evidence supports any prediction made.

Biology

Humans and animals

- Use scientific names for some major organs of body systems.
- Identify the position of major organs in the body.
- Describe the main functions of the major organs of the body.
- Explain how the functions of the major organs are essential.

Living things in their environment

- Explore how humans have positive and negative effects on the environment, e.g. loss of species, protection of habitats.
- Explore a number of ways of caring for the environment, e.g. recycling, reducing waste, reducing energy consumption, not littering, encouraging others to care for the environment.
- Know how food chains can be used to represent feeding relationships in a habitat and present these in text and diagrams.
- Know that food chains begin with a plant (the producer), which uses energy from the sun.
- Understand the terms *producer*, *consumer*, *predator* and *prey*.
- Explore and construct food chains in a particular habitat.

Chemistry

Material changes

- Distinguish between reversible and irreversible changes.

- Explore how solids can be mixed and how it is often possible to separate them again.
- Observe, describe, record and begin to explain changes that occur when some solids are added to water.
- Explore how, when solids do not dissolve or react with water, they can be separated by filtering, which is similar to sieving.
- Explore how some solids dissolve in water to form solutions and, although the solid cannot be seen, the substance is still present.

Physics

Forces and motion

- Distinguish between mass measured in kilograms (kg) and weight measured in Newtons, noting that kilograms are used in everyday life.
- Recognise and use units of force, mass and weight and identify the direction in which forces act.
- Understand the notion of energy in movement.
- Recognise friction (including air resistance) as a force which can affect the speed at which objects move and which sometimes stops things moving.

Electricity and magnetism

- Investigate how some materials are better conductors of electricity than others.
- Investigate how some metals are good conductors of electricity while most other materials are not.
- Know why metals are used for cables and wires and why plastics are used to cover wires and as covers for plugs and switches.
- Predict and test the effects of making changes to circuits, including length or thickness of wire and the number and type of components.
- Represent series circuits with drawings and conventional symbols.