
Stage 7

E Scientific enquiry

Ep Ideas and evidence

- **7Ep1** Be able to talk about the importance of questions, evidence and explanations
- **7Ep2** Make predictions and review them against evidence

Ep Plan investigative work

- **7Ep3** Suggest ideas that may be tested
- **7Ep4** Outline plans to carry out investigations, considering the variables to control, change or observe
- **7Ep5** Make predictions referring to previous scientific knowledge and understanding
- **7Ep6** Identify appropriate evidence to collect and suitable methods of collection
- **7Ep7** Choose appropriate apparatus and use it correctly

Eo Obtain and present evidence

- **7Eo1** Make careful observations including measurements
- **7Eo2** Present results in the form of tables, bar charts and line graphs
- **7Eo3** Use information from secondary sources

Ec Consider evidence and approach

- **7Ec1** Make conclusions from collected data, including those presented in a graph, chart or spreadsheet
- **7Ec2** Recognise results and observations that do not fit into a pattern, including those presented in a graph, chart or spreadsheet
- **7Ec3** Consider explanations for predictions using scientific knowledge and understanding and communicate these
- **7Ec4** Present conclusions using different methods

B Biology

Bp Plants

- **7Bp1** Recognise the positions, and know the functions of the major organs of flowering plants, e.g. root, stem, leaf

Bh Humans as organisms

- **7Bh1** Explore the role of the skeleton and joints and the principle of antagonistic muscles
- **7Bh2** Recognise the positions and know the functions of the major organ systems of the human body. Secondary sources can be used
- **7Bh3** Research the work of scientists studying the human body

Bc Cells and organisms

- **7Bc1** Identify the seven characteristics of living things and relate these to a wide range of organisms in the local and wider environment
- **7Bc2** Know about the role of micro-organisms in the breakdown of organic matter, food production and disease, including the work of Louis Pasteur
- **7Bc3** Identify the structures present in plant and animal cells as seen with a simple light microscope and/or a computer microscope
- **7Bc4** Compare the structure of plant and animal cells
- **7Bc5** Relate the structure of some common cells to their functions. Secondary sources can be used
- **7Bc6** Understand that cells can be grouped together to form tissues, organs and organisms

Be Living things in their environment

- **7Be1** Describe how organisms are adapted to their habitat, drawing on locally occurring examples. Secondary sources can be used
- **7Be2** Draw and model simple food chains
- **7Be3** Discuss positive and negative influence of humans on the environment, e.g. the effect on food chains, pollution and ozone depletion
- **7Be4** Discuss a range of energy sources and distinguish between renewable and non-renewable resources. Secondary sources can be used

Bv Variation and classification

- **7Bv1** Understand what is meant by a species
- **7Bv2** Investigate variation within a species. Secondary sources can be used
- **7Bv3** Classify animals and plants into major groups, using some locally occurring examples

C Chemistry

Cs States of matter

- **7Cs1** Show in outline how the particle theory of matter can be used to explain the properties of solids, liquids and gases, including changes of state

Cp Material properties

- **7Cp1** Distinguish between metals and non-metals
- **7Cp2** Describe everyday materials and their physical properties

Cc Material changes

- **7Cc1** Use a pH scale.
- **7Cc2** Understand neutralisation and some of its applications
- **7Cc3** Use indicators to distinguish acid and alkaline solutions

Ce The Earth

- **7Ce1** Observe and classify different types of rocks and soils
- **7Ce2** Research simple models of the internal structure of the Earth
- **7Ce3** Examine fossils and research the fossil record
- **7Ce4** Discuss the fossil record as a guide to estimating the age of the Earth
- **7Ce5** Learn about most recent estimates of the age of the Earth

P Physics

Pf Forces and motion

- **7Pf1** Describe the effects of forces on motion, including friction and air resistance
- **7Pf2** Describe the effect of gravity on objects. Secondary sources can be used

Pe Energy

- **7Pe1** Understand that energy cannot be created or destroyed and that energy is always conserved
- **7Pe2** Recognise different energy types and energy transfers

Pb The Earth and beyond

- **7Pb1** Describe how the movement of the Earth causes the *apparent* daily and annual movement of the sun and the stars
- **7Pb2** Describe the relative position and movement of the planets and the sun in the solar system
- **7Pb3** Discuss the impact of the ideas and discoveries of Copernicus, Galileo and more recent scientists
- **7Pb4** Understand that the sun and other stars are sources of light and that planets and other bodies are seen by reflected light