

Science

Biology

Animals and humans

Look at the digestive system in humans.

Look at teeth.

All living things

Look at classification keys.

Look at the effect of diet, exercise and drugs.

Chemistry

States of matter

Look at solids, liquids and gases, changes of state, evaporation, condensation and the water cycle.

Materials

Examine the properties of materials using various tests.

Examine changes to materials that create new materials that are usually not reversible.

Physics

Sound

Look at sources, vibration, volume and pitch

Working Scientifically

Across all year groups scientific knowledge and skills should be learned by working scientifically. (This is documented in the Essentials for progress section.)

Physics

Electricity

Look at appliances, circuits, lamps, switches, insulators and conductors.

Look at circuits, the effect of the voltage in cells and the resistance and conductivity of materials.

Art & Design

Use experiences, other subjects across the curriculum and ideas as inspiration for artwork.

Develop and share ideas in a sketchbook and in finished products.

Learn about the great artists, architects and designers in history.

Computing

Design and write programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Use logical reasoning to explain how a simple algorithm works, detect and correct errors in algorithms and programs.

Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration.

Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Design & Technology

Design

Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.

Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

Make

Select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately.

Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

Evaluate

Investigate and analyse a range of existing products.

Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

Understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors.

Cooking and nutrition

Understand and apply the principles of a healthy and varied diet.

Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.

Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

Geography

Locate the world's countries, with a focus on Europe and countries of particular interest to pupils.

Locate the geographic zones of the world.

Understand the significance of the geographic zones of the world.

Describe and understand key aspects of:

- physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes and the water cycle

- human geography, including: settlements, land use, economic activity including trade links and the distribution of natural resources including energy, food, minerals and water supplies.

Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied.

Use the eight points of a compass, four-figure grid references, symbols and keys (including the use of Ordnance Survey maps) to build knowledge of the United Kingdom and the world.

Use a wide range of geographical sources in order to investigate places and patterns.

History

Britain's settlement by Anglo Saxons and Scots.

The Viking and Anglo Saxon struggle for the Kingdom of England.