

**Science****Biology****Plants**

Look at the function of parts of flowering plants, requirements of growth, water transportation in plants, life cycles and seed dispersal.

Evolution and inheritance

**All living things**

Identify and name plants and animals'

Look at classification keys.

Look at the life cycle of animals and plants.

Look at classification of plants, animals and micro organisms.

Look at reproduction in plants and animals, and human growth and changes.

**Chemistry****Materials**

Examine the properties of materials using various tests.

**Physics****Light**

Look at sources, seeing, reflections and shadows.

Explain how light appears to travel in straight lines and how this affects seeing and shadows.

**Forces and magnets**

Look at poles, attraction and repulsion.â€”

Look at the effect of gravity and drag forces.

Look at transference of forces in gears, pulleys, levers and springs.

**Earth and space**

Look at the movement of the Earth and the Moon.

Explain day and night.

**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.

Improve mastery of techniques.

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 sequence, selections and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predicted outputs to test programs.

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.

Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely.

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**

apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages.

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

apply their understanding of computing to programme, monitor and control their products.

**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 focus on North and South America and countries of particular interest to pupils.

Identify key geographical features of the countries of the United Kingdom, and show an understanding of how some of these aspects have changed over time.

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.

Use fieldwork to observe, measure and record the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs and digital technologies.

### History

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

A study of a theme in British history.

Early Civilizations achievements and an in-depth study of one of the following: Ancient Sumer; The Indus Valley; Ancient Egypt; The Shang Dynasty.

History of interest to pupils

### Language

In the chosen modern language:

- Speak
- Read
- Write

Look at the culture of the countries where the language is spoken.

### Music

Play and perform in solo and ensemble contexts, using voice and playing instruments with increasing accuracy, control and expression.

Improvise and compose music using the inter-related dimensions of music separately and in combination.

Listen with attention to detail and recall sounds with increasing aural memory.

Use and understand the basics of the staff and other musical notations.

Appreciate and understand a wide range of high-quality live and recorded music from different traditions and from great musicians and composers.

Develop an understanding of the history of music.

### Personal Development

Discuss and learn techniques to improve in the eight areas of 'success'.

Study role models who have achieved success.

Study those who have lost success and relate this to the eight areas of 'success'.

### Physical Education

Play competitive games, modified where appropriate, such as football, netball, rounders, cricket, hockey, basketball, badminton and tennis and apply basic principles suitable for attacking and defending.

Take part in gymnastics activities.

Take part in athletics activities.

Perform dances.

Take part in outdoor and adventurous activity challenges both individually and within a team.

Swimming and water safety: take swimming instruction either in Key Stage 1 or Key Stage 2.

### Religious Education

Study the beliefs, festivals and celebrations of Christianity.

Study at least two other religions in depth. Choose from Buddhism, Hinduism, Islam, Judaism or Sikhism.

Study three of the major six religions not studied in depth in order to gain a brief outline.

Study other religions of interest to pupils.