

# Science Curriculum Summary

Science stimulates and excites the curiosity of pupils about phenomena and events world around them. It satisfies a need for knowledge while empowering them with the skills to take on new situations methodically and scientifically. Because Science links direct practical experience with ideas, it engages learners at many different levels. The scientific method is about developing and evaluating explanations through experimental evidence and modelling. This is a spur to creative and critical thought. Through Science, pupils understand how major scientific ideas contribute to technological change, industry, business, medicine and education, thus impacting on the quality of life on Earth and beyond.

Topics may include

- x Materials
- x Plants
- x Temperature
- x Changes
- x Life cycles
- x Water cycle
- x Displacement theory
- x Flight

Transition 2 (T2)

Skills

- x Initiate their own investigations and to predict what might happen before deciding what to do
- x Select their own resources giving reasons for their choice and compare their results with their predictions
- x Communicate what happened in an experiment in a ~~vari~~ <sup>var</sup>ious ways
- x Make comparisons and identify simple patterns or associations
- x Predict what might happen in an experiment
- x Begin to understand what makes a fair test
- x Use grouping and sorting to find out about the world
- x Make observations

Topics may include

- x Forces
- x Variation
- x Grouping and changing
- x Habitats
- x Materials
- x In the summer term, the children choose their own topic for study and scientific skills are taught through this area of their interest.

Form 1

Skills

- x Plan and ~~arr~~ <sup>car</sup>ry out a fair test
- x Observe, measure and record data
- x Explain their ideas

Topics

- x Light and shadow
- x Earth, Sun and Moon
- x Magnetism
- x Forces
- x Minerals, rocks and fossils
- x Habitats variation, classification and grouping

Form 2 (as STEM)

Form 2 Science skills are being taught through STEM lessons, in which Science, technology and computing are taught in a cross-curricular way.

Topics:

- x Orientation.
- x Structures and bridge design challenge.
- x Flight.

- x Electricity
- x Introduction to the use of Microbits
- x Data collection and analysis
- x Forces investigations
- x Human skeleton

### Form 3

#### Skills

- x Think creatively to explain how living and non-living things work and to establish links between causes and effects
- x Think about and plan when trying to find answers to questions, considering what might happen before trying out
- x Choose appropriate equipment and methods
- x Carry out fair tests or comparisons by changing one factor and observing or measuring the effect while keeping other factors the same
- x Consider the dependent, independent and control variables when planning investigations

#### Topics

- x Solids Liquids and gases
- x Teeth and healthy eating
- x Hearing and seeing
- x Adaptations and habitats
- x Plant growth and reproduction
- x Insulators

### Form 4

#### Skills

- x Manipulate simple laboratory equipment safely, following written and verbal instructions
- x Make predictions, accurate observations and measurements
- x Record, interpret and explain through carrying out a range of experiments and investigations

- x Metal Reactions
- x Forces
- x Acid Reactions
- x Light and Sound
- x Energy
- x Variation
- x Carbon Chemistry

Contribution to Spiritual, Moral, Social and Cultural Education

Science develops SMSC in a wide variety of ways, including:

- x Developing a sense of wonder in the natural world
- x Learning about the contributions of scientists from around the world to Science
- x Developing children's ability to observe and interpret
- x Supporting children to work collaboratively
- x Developing children's ability to find creative and imaginative solutions to problems and questions
- x