Science at Newton Hill Community School

Through high-quality science teaching, we aim to help our pupils understand how major scientific ideas have played a vital role in society. Moreover, we aim to prepare our pupils for life in an increasingly scientific and technological world.

We aim to do this by:

- Delivering high quality, interesting and engaging science lessons;
- Using scientific contexts to develop and consolidate cross curricular skills in literacy, maths and ICT;
- Teaching science in a global and historical context; including the contributions of significant scientists from a range of cultures;
- Developing and extending pupils' scientific knowledge and understanding;
- Developing pupils' ability to work scientifically and involve pupils in planning, carrying out and evaluating investigations;
- Developing pupils' scientific vocabulary and ability to articulate scientific concepts clearly and precisely;
- Ensuring that all pupils are appropriately challenged to make good progress in science.

At Newton Hill Community School, teachers plan and deliver high-quality and engaging science lessons incorporating a range of teaching and learning styles. At Newton Hill Community School, teachers will provide opportunities for pupils to:

- Learn about science, where possible, through first-hand practical experiences;
- Develop their research skills through the appropriate use of secondary sources;
- Work collaboratively in pairs, groups and/or individually;
- Plan and carry out investigations with an increasing systematic approach as they progress through school;
- Use equipment safely and sensibly;
- Develop their questioning, predicting, observing, measuring and interpreting skills;
- Record their work in a variety of ways e.g writing, diagrams, graphs, tables;

- Read and spell scientific vocabulary appropriate for their age;
- Be motivated and inspired by engaging and interactive science displays which include key vocabulary and relevant questions;
- Learn about science using the outdoor learning environment;
- Understand the uses and implications of science today and for the future.

In EYFS, science is taught within 'Understanding the World'. Children learn about similarities and differences in relation to places, objects, materials and living things. They can also compare their own environments and how environments may differ from one to another. Children also make observations of animals and plants and explain why some things occur.

In Key Stage 1, the main aim of science is to enable pupils to experience and observe phenomena, looking closely at the natural and human-constructed world around them. Our children are encouraged to be curious and ask questions about their observations. The children take part in different types of scientific enquiry including observing changes over a period of time, noticing patters, grouping and classifying, comparative tests and using secondary sources to research information. They will communicate their ideas using simple scientific knowledge and can present their work in a variety of ways. Working scientifically is taught throughout the curriculum.

The topics the children learn are:

- Seasonal changes,
- Plants,
- Animals, including humans,
- Everyday materials and uses of everyday materials,
- Living things and their habitats.

In Lower Key Stage 2 (Years 3 and 4), we enable the children to broaden their scientific view of the world around them. They are encouraged to do this through exploring, talking about, testing and further developing ideas about every day life and the wider

world around them. They develop their scientific enquiry skills by asking their own questions about what they observe and deciding the best way to answer them including observing changes over a period of time, noticing patters, grouping and classifying, comparative tests and using secondary sources to research information. The children are then taught how to draw their own simple conclusions to talk and write about their findings.

The topics the children learn are:

- Plants,
- Animals, including humans,
- Rocks.
- Light,
- Forces and magnets.
- Living things and their habitats,
- States of matter,
- Sound,
- Electricity.