Corrie Primary & Nursery School

Science Policy

At Corrie we value the Arts and Democracy as core drivers within our Science curriculum. We value the opportunities art enables all children to express their understanding of concepts that they can't explain verbally, for example, using diagrams, actions, dance and role play. We aim to provide a learning atmosphere which encourages curiosity, perseverance, open-mindedness, critical reflection and co-operation. We endeavour to provide a broad and balanced learning experience for all our children and, wherever possible, opportunities to develop skills and gain an understanding of Science concepts through first-hand experience and practical work. Children collaboratively plan and implement investigations for their own enquiries, which support their spiritual and social development. We also use Science to promote the children's moral and cultural understanding by exploring other scientists' theories, environmentalist and human issues and how these concepts impact on us, our communities and the wider world.

1 Aims and objectives

The national curriculum for science aims to ensure that all pupils:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to creatively answer scientific questions about the world around them.
- Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

The aims of science are to enable children to:

- Ask and answer specific questions;
- Plan and carry out scientific investigation, using equipment, including computers correctly;
- Know and understand the life processes of materials, electricity, light, sound and natural forces;
- Know about the nature of the solar system, including the earth;
- Evaluate evidence and present their conclusions clearly and accurately.

2 Teaching and learning style

We use a variety of teaching and learning styles in science lessons. Our principal aim is to develop children's knowledge, skills, and understanding. Sometimes we do this through whole-class teaching, while at other times we engage the children in an enquiry-based research activity. We encourage the children to ask, as well as answer, scientific questions. They have the opportunity to use a variety of data, such as statistics, graphs, pictures, and photographs. They use ICT in science lessons where it enhances their learning. They occasionally take part in role-play and discussions and they present reports to the rest of

the class. They engage in a wide variety of problem-solving activities. Wherever possible, we involve the pupils in 'real' scientific activities.

We recognise that there are children of widely different scientific abilities in all classes and we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways by:

- Setting common tasks which are open-ended and can have a variety of responses.
- Setting tasks of increasing difficulty (we don't expect all children to complete all tasks)
- Using classroom assistants to support the work of individual children or groups of children.
- Discussing in mixed ability Kagan groups

3 Science curriculum and planning

The school uses the national curriculum objectives for science as the basis of its curriculum planning. The Active Learn Science Bug scheme is used as our core scheme from Year 1 to Year 6 to support the planning of Science. Teachers also use resources and ideas from other schemes to support and extend the children's learning. We make use of our own wild area at school and the local environment in our fieldwork.

The whole school long-term plan maps the scientific topics studied in each term during the key stage and year group. This is based on the units of work in the Science Bug scheme for each year group from Year 1 to Year 6. In some cases, we combine the scientific study with work in other subject areas, at other times the children study science as a discrete subject. Our medium-term plans, known as our curriculum statements, are based on the national curriculum objectives for science. These give details of each unit of work for each term. The class teacher is responsible for writing the individual lesson plans for each lesson (short-term plans). These plans list the specific learning objectives of each lesson and how they intend for the children to achieve these.

We have planned the topics in science so that they build upon prior learning. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit and we also build progression into the science scheme of work, so that the children are increasingly challenged as they move up through the school. Where possible, Science is also linked to activities within the creative curriculum.

4 Foundation Stage

We teach science in E.Y.F.S. as an integral part of the topic work covered during the year. We relate the scientific aspects of the children's work to the objectives set out in 'Development Matters' and Early Learning Goals, which underpin the curriculum planning for children aged three to five. Science makes a significant contribution to the objective in

the ELGs of developing a child's knowledge and understanding of the world, e.g. through investigating what floats and what sinks when placed in water.

5 The contribution of science to teaching in other curriculum areas

English

Science contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. Some of the texts that the children study in Guided Reading are of a scientific nature. The children develop oral skills in science lessons through discussions (for example of the environment) and through recounting their observations of scientific experiments. They develop their writing skills through writing reports and projects and by recording information.

Mathematics

Science contributes to the teaching of mathematics in a number of ways. The children use weights and measures and learn to use and apply number. Through working on investigations they learn to estimate and predict. They develop the skills of accurate observation and recording of events. They use numbers in many of their answers and conclusions.

Information and communication technology (ICT)

Children use ICT in science lessons where appropriate. They use it to support their work in science by learning how to find, select, and analyse information on the Internet. Children use ICT to record, present and interpret data and to review, modify and evaluate their work and improve its presentation.

Personal, social and health education (PSHE) and citizenship

Science makes a significant contribution to the teaching of personal, social and health education. This is mainly in two areas. Firstly, the subject matter lends itself to raising matters of citizenship and social welfare. For example, children study the way people recycle material and how environments are changed for better or worse. Secondly, children benefit from the nature of the subject in that it gives them opportunities to take part in debates and discussions.

Spiritual, moral, social and cultural development

Science teaching offers children many opportunities to examine some of the fundamental questions in life, for example, the evolution of living things and how the world was created. Through many of the amazing processes that affect living things, children develop a sense of awe and wonder regarding the nature of our world. Science raises many social and moral

questions. Through the teaching of science, children have the opportunity to discuss, for example, the effects of smoking and the moral questions involved in this issue. We give them the chance to reflect on the way people care for the planet and how science can contribute to the way we manage the earth's resources. Science teaches children about the reasons why people are different and, by developing the children's knowledge and understanding of physical and environmental factors, it promotes respect for other people.

6 Teaching science to children with special needs

We teach science to all children, whatever their ability. Science forms part of the school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of children with learning difficulties. Our work in science takes into account the targets set in the children's provision maps.

7 Assessment and recording

We assess children's work in science by making informal judgements as we observe them during lessons. On completion of a piece of work, the teacher uses the school's marking policy to mark the work. At the end of a unit of work s/he makes a summary judgement about the work of each pupil within lessons. The children will complete a formal assessment using the Headstart Primary materials. This data is recorded as steps of progress using the Target Tracker system on a termly basis. The children's attainment and progress is monitored in all classes by the subject leader and SLT.

Teachers make an assessment of the children's work in science at the end of the Key Stages. We report the results of these tests to parents along with the teacher assessments which we make whilst observing the work of children throughout the year.

8 Resources

We have sufficient resources for all science teaching units in the school. We keep the resources in a central store where there is a box of equipment for each unit of work. The library contains a supply of science topic books. Teachers can also loan a collection of topic themed books from the Tameside Library loan service each half term.

9 Monitoring and review

It is the responsibility of the science subject leader to monitor the standards of children's work and the quality of teaching in science. The science subject leader is also responsible for supporting colleagues in the teaching of science, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school.

Signed:

Coordinator: Mrs Yvonne Lynch

Date discussed with staff: Spring 2023

Date approved by Governors:

Signed

Date of review: Summer 2025