

## Folly View Primary School – Science Policy

At Folly View Primary School, our core values are to **inspire**, **believe** and **achieve**. Our vision states that we aim to be a community where everyone is **inspired** by a love of learning, supported to **believe** in themselves and enable to **achieve** great success. This is what underpins our teaching and learning and puts the children at the centre of all we do.

This policy outlines the teaching and learning of science within our school and the impact we strive to achieve putting our children at the forefront. The school's policy for science is based on the National curriculum. The implementation of this policy is the responsibility of all teaching staff.

The National Curriculum states the purpose of teaching a high quality science education is to provide "the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity." The curriculum highlights the importance of children being encouraged to "understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes."

Children are naturally fascinated by all they see and in the world around them. Science make an increasing and valuable contribution to their knowledge and understanding of all aspects of life.

Through science we will continue to develop children's natural curiosity, respect and appreciation of the world and all of its phenomena.

### **Aims and Objectives**

We live in an ever changing scientific and technological age where children need to acquire the knowledge, skills and understanding to prepare them for what the future holds. Through the framework of the National Curriculum, we aim to do this by:

- developing and stimulating children's enjoyment and interests in the area of science
- building on children's natural curiosity and sense of wonder about the world
- developing children's scientific language and building on their vocabulary
- extend the learning environment for our children by the use of our environmental areas and the locality
- developing the skills of observation, prediction, investigation, interpretation and communication through practical work as well as the ability to make accurate and appropriate measurements
- developing potential scientific links in computing and all other areas of the curriculum
- using equipment safely and sensibly
- enabling children to be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

### **Teaching and Learning**

At Folly View, teachers plan and deliver high-quality and engaging science lessons which incorporate a range of teaching and learning styles. We aim to develop children's skills, knowledge and understanding. This is achieved through whole-class teaching, group activities and individual activities. Children are encouraged to answer as well as ask scientific questions. In order to enhance children's learning experiences, they are given the opportunity to use books, photographs, diagrams, graphs, models and ICT. Science allows children to be open-minded and to try and make sense of what they see and find out.

### Early Years Foundation Stage (EYFS)

Science is taught as an integral part of our topic work throughout the year. Within the Early Learning Goals, science makes a significant contribution to developing children's understanding of the world. Children build upon their natural curiosity and fascination for their surroundings and the world around them. We encourage children to use all their senses to investigate, explore and to make predictions whilst making sense of the world. Children are given the opportunity to deepen their understanding of their natural surroundings through woodlanders.

### Key Stage 1 and Key Stage 2

Throughout Key Stage 1, science is planned so that children are building upon prior learning. We aim to build progression into the scheme of work, so that children are increasingly challenged as they progress through the school. We ensure that there are opportunities for children of all abilities to develop their skills, knowledge and understanding in science. Science is taught as a discrete lesson and as part of cross-curricular themes when appropriate. Children are given the opportunity to learn key concepts through a range of first and second hand experiences. Our science lessons have clear learning objectives, differentiation to ensure all children make at least good progress and open-ended investigations where appropriate.

Working scientifically is embedded throughout the children's learning in science. Children should be taught to use the following practical scientific methods, processes and skills through the teaching of science:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.

### Spiritual, moral, social and cultural development

The teaching of science offers children many opportunities to explore and ask questions regarding some of the fundamental questions in life. Children can develop a sense of awe and wonder about the nature of our world through the many amazing processes that affect living things. Children have the opportunity to discuss, reflect and question many social and moral questions, for example, the effects of pollution and the moral questions that surround this. This opens up the chance for children to reflect on the way in which humans care for the planet and how science contributes to this. Science allows children to learn about and understand why humans are different, it allows them to explore how diverse our planet is and promotes a respect for each other, all living things and the world in which we live.

## **Assessment**

Assessment is continuous throughout the planning, teaching and learning cycle. Assessment for learning is carried out at the start and end of each topic by children completing their KWL (what I Know, what I Want to know and what I Learnt) grid and also through questioning. At the end of a term or topic, children complete a TAPs (Teacher Assessment in Primary School) focussed assessment linked to the working scientifically skills. These focussed assessments contribute to ongoing summative assessments. They give children the opportunity to develop their understanding and skills and allow time for specific enquiry skills to be monitored. Children's work is assessed formatively throughout the topics by both observations and marking. These assessments allow teachers to ensure they are planning lessons based on children's abilities, knowledge and understanding. They enable children to make progression throughout their learning of science. This allows teachers to use assessments made to inform reports to parents and the next class teacher at the end of the year.

## **Monitoring**

Overall it is the responsibility of the Science Leader, the Head teacher and Governors to monitor the standards of children's work and the quality of teaching in science. The Science Leader also has the responsibility for keeping teaching staff informed about any current developments in science, providing direction for science in school, and providing support in the teaching of science where needed. Teaching staff need a clear understanding of what science looks like in each year group and the progression children should be making throughout each stage. An action plan is written annually and updated when needed. To ensure there is consistency within each year group and across the school, planning and book scrutiny are carried out by the science leader and feedback is given to teachers at an appropriate time.

## **Health and Safety**

All staff are aware of the requirement of the school's health and safety policy and should adhere to this. Risk assessments are carried out where necessary for scientific activities within the planning process and children are made aware of safety measures and dangers when experimenting.

## **Resources**

We have a range of science resources that are stored in the hall and the resources cupboard. There are some boxes of equipment for particular topics and experiments. Situated in the same storage place, there are collections of materials and objects of scientific interest. The school's grounds is a valuable educational resource for scientific enquiry, knowledge and understanding. It offers different habitats to explore: trees, flowers, the woods, vegetable plots and individual outside areas for classrooms. Teachers are encouraged to make good use of these areas where the opportunity of learning science lends itself to being outdoors. The local environment provides for exciting learning opportunities for children including Badbury Clumps and the Folly Tower. Visits are planned further afield to provide children the opportunity to learn, investigate, explore and experience different environments including Hill End. Where possible guest speakers are encouraged to visit the school so that children may receive a broad and varied perspective.

## **Role of the subject leader**

The role of the subject leader includes:

- reviewing the National Curriculum requirements and ensure the implementation of these
- attending, developing and implementing relevant CPD courses
- ensuring the development of science reflects and enhances the schools philosophy and ethos
- coordinating a policy and scheme of work
- carrying out an audit of the school's science resources and organise resources and budgets
- monitoring learning and teaching of science through learning works, observations, book scrutiny and pupil voice and provide support for staff where needed
- taking a lead role in organising science events in line with local and national initiatives such as British Science Week
- encouraging parents/carers to be involved in their children's learning of science for example holding a family science evening
- collating and analysing end of topic/key stage assessments and data to measure progress and identify strengths and gaps within science and using this to set new priorities for subsequent years

Policy written by subject leader: T.Patel