



## MANOR PRIMARY SCHOOL

### SCIENCE POLICY

*This policy document is a statement of the intent, implementation and impact of the teaching and learning of science at Manor Primary School.*

#### **Intent**

Developing and increasing children's understanding and enjoyment of science is at the centre of our curriculum. Science teaches an understanding of natural phenomena through the disciplines of chemistry, physics and biology. It aims to stimulate a child's curiosity in finding out why things happen in the way they do. It teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way in which science will affect the future on a personal, national, and global level.

*The school's policy for science follows the National Curriculum for Science Guidelines and the Early Years Foundation Stage Framework and aims to ensure that all pupils:*

- develop enquiring minds and the ability to question through first hand learning and opportunities to experiment, explore and investigate.
- 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 a variety of different scientific enquiries that help them to answer 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.
- are encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.
- develop their problem solving and reasoning skills so that they can apply their scientific knowledge, skills and understanding across other areas of the curriculum.
- understand the importance of using equipment safely, sensibly and correctly.

Teaching science enables children to:

- know and understand the life processes of living things;
- know and understand the physical processes of materials, electricity, light, sound, and natural forces;
- know about the nature of the solar system, including Earth.

## **Principles of good science teaching**

- Children's curiosity is encouraged and valued; they are excited and enthusiastic when participating in their science lessons.
- Where possible, science is practical and hands on and children enjoy learning through exploration and questioning; they have the opportunity to use good quality resources.
- Enrichment events such as science workshops and science days are enjoyed by children across the school.
- Progression of science skills is evident and taught throughout the school.
- Children confidently use accurate scientific vocabulary in context.
- Teachers will use different assessment formats and strategies during science lessons to assess outcomes.
- Pupils are actively engaged in a science enquiry; using a variety of enquiry strategies, independently making decisions and answering their own questions.

## **Implementation**

*The programmes of study for science are set out year-by-year for key stages 1 and 2. Schools are, however, only required to teach the relevant programme of study by the end of the key stage. Within each key stage, schools have the flexibility to introduce content earlier or later than set out in the programme of study. 'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group and should not be taught as a separate strand. This element should be embedded throughout the delivery of the science curriculum. Each unit of learning is taught and developed during the children's time at school through a variety of science topics which have been adapted from the National Curriculum.*

## **Curriculum Planning**

*We have a well-established curriculum that ensures all National Curriculum objectives are covered. Please refer to our implementation grids.*

*It is the responsibility of the class teacher to ensure that the weekly lessons for any subject are tailored to meeting the needs of the individual children in their class. Cross-curricular links to other subjects will be made so that pupils can develop an understanding of this subject in an appropriate context. Where there is no link, units will be stand-alone to ensure curriculum coverage. In Early Years, science is an integral part of themes being taught.*

## **Impact**

*Progress and achievement in science is evident throughout the curriculum, with pupils continuously building upon skills they acquire each year and applying their skills and knowledge in a variety of contexts. When written work is completed, Teachers will mark pupils' work in line with the school marking policy where appropriate, to help the pupils make progress.*

*It is the responsibility of the class teacher to maintain an overview of each child's progress in science.*

- *Assessment is carried out in line with the school policy against National Curriculum expectations.*
- *Assessments are carried out using both summative and formative assessment procedures.*
- *Different formats will be used to assess outcomes including working scientifically.*
- *Assessments are used to inform planning and teaching and learning.*
- *Written or verbal feedback is given to the child in line with school marking policy, to help guide their progress.*

*Monitoring for science is carried out in line with the school monitoring policy. Samples of work are collected and there are folders, kept by the science leader, demonstrating the progression of science throughout the school.*

### **Equal Opportunities and Inclusion**

*We recognise that in all classes children have a wide range of abilities, 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 by:*

- *Involving all of the children in oral work.*
- *Planning differentiated work to suit the ability of the children.*
- *Allowing access to materials and equipment.*
- *Providing additional equipment and resources that allow children to access the subject where necessary.*
- *Ensuring planned activities are relevant to all pupils.*
- *Having high expectations of every child.*
- *Ensuring examples are free from stereotyping.*

### **Resources**

*All classrooms have interactive whiteboards which are used as a starting point for each lesson and have internet access. A wide range of other resources are accessible from key areas in school. Objects/resources that are specific to a single year group are kept within those classrooms.*

*Ideally, all staff members should be responsible for collecting and returning necessary items to the correct place to ensure that resources are easy for all staff to find. Staff are responsible for informing the subject leader; when extra resources are needed, when there are breakages and when consumables are running low.*

## **Health and Safety**

*All members of staff will ensure that conditions apply which will minimise the risks and potential hazards involved in this subject. The school's "Health and Safety Policy" should be consulted for details regarding scissors, craft tools, electrical equipment, wet areas and use of other tools. Where appropriate, staff should seek advice from the Curriculum Leader/Competent Person. If teachers are unclear as to whether a material can be used in school, they should consult the relevant Health and Safety posters displayed and also consult the named Competent Person before proceeding. Teachers need to take account of both the children's and their own health and safety when involved in activities.*

## **Role of Science Leader**

- To be enthusiastic about science and demonstrate good practises.*
- To keep up to date with current developments in science.*
- To audit resources, identify needs and order equipment in school after consultation with colleagues.*
- To 'sample' the work of children across the age range (curriculum monitoring).*
- To review and evaluate the effectiveness of teaching and learning in science, including the monitoring of planning and teaching within lessons.*
- To provide guidance on the implementation of the science policy.*
- To suggest/create appropriate assessment activities where needed.*
- To provide support to those colleagues who request/require it, including help with planning and organisation*