



# Walter Infant School

## SCIENCE POLICY

### DOCUMENT HISTORY

Version	Action	By	Date
1	Approved	Full Governing Body	11/07/2017

**Next Review Date: July 2020**

## 1. Introduction

We live in an increasingly scientific and technological age, where children need to acquire the knowledge, skills and attitudes to prepare them for life in the 21st Century. The teaching of science stimulates children's interest in the world around them and develops their natural curiosity to find out why things happen in the way that they do. It encourages questioning and advocates first-hand experience and application of knowledge to find answers to questions as well as developing an understanding of the uses and implications of science today and for the future.

The teaching of science in our school reflects the main aims and objectives of the National Curriculum 2014. This policy is a statement of the school's agreed approach to the teaching of the Science Curriculum. It is to inform teachers, support staff, governors, parents/carers and the school community.

## 2. Aims

Through the framework of the National Curriculum 2014 we aim to:

- Develop and stimulate children's natural enthusiasm and curiosity about the world around them.
- Develop an appreciation of how science contributes to all aspects of everyday life and its implications and uses both today and for the future.
- Develop scientific knowledge and conceptual understanding of the physical, material and living world.
- Develop children's ability to think and act scientifically.
- Introduce the language and vocabulary of science.
- Contribute to the development of key skills in English, Mathematics and Computing.

## 3. Objectives

### 3.1 Children will:

- Develop a secure understanding of the key blocks of knowledge and concepts within the specific disciplines of biology, chemistry and physics.
- Develop their understanding of scientific ideas and concepts through quality first teaching, practical activities and planned investigations.
- Learn to use a variety of different approaches to find the answers to scientific questions.
- Have opportunities to work both collaboratively and on their own.
- Apply mathematical knowledge to collect, analyse and present information.
- Make appropriate use of ICT to research information and present findings.
- Develop a range of approaches to communicate ideas and begin to use scientific language.
- Foster a concern and respect for the local and global environment.
- Begin to understand how science is part of everyday life.

### **3.2 Teachers will:**

- Plan for progression of knowledge and key skills of scientific enquiry ensuring secure understanding of the key blocks of knowledge before progression onto the next stage.
- Engage children in science through meaningful and relevant contexts.
- Provide opportunities for children to learn and apply their knowledge in first-hand, practical activities, both individually and collaboratively.
- Ensure that scientific enquiry is embedded within all science topics for EYFS, Year 1 and Year 2
- Plan opportunities for scientific enquiry to include: observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests and finding things out using secondary sources of information.
- Provide opportunities for children to articulate their scientific understanding both written and orally, encouraging and modelling the correct use of scientific language.
- Monitor pupil progress and adapt teaching accordingly.
- Keep up to date records of individual pupil progress.

## **4. Organisation and Teaching Methods**

Children are taught science within their mixed ability class setting. A variety of teaching and learning styles is used to develop children's scientific skills, knowledge and understanding. These include: whole-class teaching, collaborative group activities, enquiry-based research and practical investigations and activities. Our aim is to make science as meaningful as possible for the children and our bias is towards practical hands-on activities within real-life contexts. The outdoor environment is used where appropriate and educational trips extend children's knowledge and understanding at first-hand.

## **5. Planning and Assessment**

The school plans units of work following the programme of study for science as outlined in the National Curriculum 2014. The long term plans map the scientific units taught each term and the medium term plans outline the objectives to be covered for individual units. Across the year groups, units of work are carefully planned to ensure progression of knowledge and conceptual understanding. A sound understanding of knowledge for each unit is ensured before progression onto the next stage of study, building secure foundations for future study. Opportunities for developing the skills of scientific enquiry are integrated into each unit of work.

Teacher assessment judgements are recorded at the end of each unit to aid the tracking and monitoring of progress for individuals and groups of children. These judgements relate to the progress the children are making towards our agreed end of year Age Related Expectations (ARE).

## 6. Foundation Stage

Science in Foundation Stage is taught in line with the Curriculum Guidance for the Foundation Stage. Further detail can be found in the Foundation Stage Policy.

## 7. Inclusion

All our children at Walter Infant School are entitled to *Quality First Teaching* and we aim to give provision in science that will enable all children to achieve to the best of their ability. We will identify individuals or groups of children who are under achieving and take steps to improve their attainment, whilst differentiation will be employed to support and extend, allowing all children to achieve across a range of abilities.

## 8. Equal Opportunities

Walter Infant School wants every child to succeed and to be the best they can be, regardless of their background or circumstances. Children learn and thrive when they are healthy, safe and engaged. In order to engage all children, cultural diversity, home languages, gender and religious beliefs are all celebrated. A wide range of equipment and other resources should be considered which represent the diversity and backgrounds of all our children. We believe in valuing what the child brings to school and recognise the importance of supporting a child's first language, not only to foster self-esteem, but to assist in the learning of science.

## 9. Health and Safety

Safety when using scientific equipment and materials is always of the utmost importance. When planning activities, teachers will anticipate any likely safety issues and take necessary precautions. Safety measures will be discussed with the children so that they fully understand the reasons behind them and any possible implications. Children should always be encouraged to consider safety for themselves, others, the environment and resources, when undertaking scientific activities.

## 10. Role of Subject Leader

The Subject Leader is responsible for improving the standards of teaching and learning in science through:

- monitoring and evaluating science, which includes:
  - pupil progress
  - provision of science
  - and the quality of the Learning Environments
- taking the lead in policy development
- auditing and supporting colleagues in their CPD
- advising on resources
- keeping up to date with recent science developments

**To be read in conjunction with:**

- The Foundation Stage Policy
- The Teaching and Learning policy
- The National Curriculum