Policy written Summer 2023

Next Review 2026

Water Orton Primary School

Science Policy

SCIENCE intent:

Water Orton Primary School encourages children through high-quality science education we 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, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.(National Curriculum 2013)

We recognise the importance of taking a consistent whole school approach to the teaching of science in order to close any gaps and to target the highest possible number of children attaining the expected standard or higher.

Through our teaching of science, we aim to ensure that all children:

• 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 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.

Implementation:

Our aim across the school is for children to develop:

Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.

Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.

Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.

Using test results to make predictions to set up further comparative and fair tests.

Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.

Identifying scientific evidence that has been used to support or refute ideas or arguments.

We aim to provide a stimulating and exciting learning environment that takes account of different learning styles and use appropriate resources to maximise teaching & learning.

Skills development

The teaching of Science should develop the key scientific skills of:

• Hypothesising and predicting.

• Planning and carrying out investigations.

• Observing and measuring.

• Presenting results by appropriate means, including use of ICT.

• Evaluating results and drawing conclusions.

How science is planned:

Long Term Planning

• All year group teams will have a Long Term Plan that outlines the science curriculum coverage for each term.

Teachers with mixed classes should be exposing their class to both year groups' objectives but differentiating accordingly

and grouping similar objectives together. The Long Term Plan must match the Medium Term Plan.

Medium Term Planning

• Medium term plans should be the first port of call when planning to ensure good coverage of all the objectives

throughout the year.

Short Term Plans

• Must be completed weekly on the school planning format and lessons should follow the 4 part school structure

(starter, modelling, development and reflection). There may be the occasional lesson which is organised in a different way

if it is more appropriate.

• Teachers will use the scientific vocabulary used in the Science national curriculum but may use resources from a

variety of sources.

Within the weekly Science lesson, teachers have a responsibility to not only provide differentiated activities to support children with SEND but also activities that provide sufficient challenge for children who are high achievers. It is the teachers' responsibility to ensure that all children are challenged at a level appropriate to their ability.

Impact:

Science is monitored throughout the academic year in the following ways:

• Informal observations/learning walks

• Monitoring of books

• Pupil voice discussions

• Analysis of pupil progress and attainment (using O-Track) in order to address underachievement for individuals or groups of children (termly)

Regular, ongoing and accurate class teacher assessment is used to inform next steps in planning and ensure that all children make progress. Verbal feedback is used to give children instant feedback.

Science Week

During the term children will take part in a national science week where each year group will undertake a theme of special lessons that will challenge their scientific thinking and writing. They may include people that come in or events that they take part with outside of school virtually or physically.

Extra support for science:

Those children who are identified as SEN for Science are closely monitored by their class teacher and school SENCO. For some children, intervention teaching will be put in place. Class teachers will identify children who may need extra support to reach their potential and provide for these children in class. Children can be supported in various ways, including through adult support, additional resources, differentiated work etc.