Science Policy

Northwick Park MAT

Northwick Park Primary and Nursery

We Take Pride

…working together

Approved by: LGBs

Date: June 2024

Next Review Date: July 2027

This policy outlines the guiding principles by which this school will implement Science in the National Curriculum (2014).

1. Intent

The 2014 National Curriculum states that:
'a high quality science education provides the foundations for understanding the world'.

At The Northwick Park MAT, we aim to stimulate children's curiosity in finding out why things happen in the way they do. We teach methods of enquiry and investigation to stimulate creative thought. Through building up a body of key foundational knowledge and concepts, pupils are encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity including about natural phenomena. Children learn to ask scientific questions and begin to appreciate the way science will affect their future on a personal, national, and global level. They are encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. They are given an enjoyable experience of science, so they will develop a deep and lasting interest in the scientific world.

Aims and objectives

We live in an increasingly scientific and technological age where children need to acquire the knowledge, skills and understanding to prepare them for life in the 21st century. Through the framework of the National Curriculum 2014, science aims:

- To stimulate children's interest and enjoyment in the area of science.

- To equip children to build on their enthusiasm and natural sense of wonder about the world.

- To develop through practical work the skills of observation, prediction, investigation, interpretation, communication, questioning and hypothesising, and increased use of precise measurement skills and ICT.

- To encourage and enable pupils to offer their own suggestions, to be creative in their approach to science and to gain enjoyment from their scientific work with increasing independence.

- To enable children to develop their skills of co-operation through working with others. To encourage pupils to be open-minded, observe and spot patterns, even if these differ from their predictions.

- To encourage children to collect relevant evidence, to question outcome, to take responsibility and to persevere.

- To encourage children to treat the living and non-living environment with respect and sensitivity. To develop care for our local and global environment including environmental, climate and sustainability awareness.

- To encourage children to raise questions and learn how to investigate and explore these using both first-hand experience and secondary sources.

• To help children understand the nature of scientific ideas and to obtain and test the evidence for them.

• To help children recognise and assess risks and hazards to themselves and to others when working with living things and materials and to take action to control them.

2. Implementation

Time allocation

The time allocated for Science is in line with the recommendations for key stages one and two. All pupils receive the basic entitlement of a weekly science lesson.

Teaching and learning

• Provision is made for different ages and levels of ability.

• Teaching aims to increase children's knowledge through the topic requirements of the National Curriculum 2014.

• Children are given opportunities to:

- Take increasing responsibility for their work.
- Work independently and in groups.
- Be involved in tasks of varying duration.
- Undertake teacher directed and child initiated tasks.
- Be proactive learners.
- Work as a team.
- Be creative.

Planning

• There is a whole school approach to planning and assessment, based on the National Curriculum 2014.

• Clear objectives are set for the lesson and shared with the pupils. Teachers differentiate according to the needs of the pupils and the success criteria is shared with the class to enable them to know what they need to do to succeed with differentiated follow up activities as appropriate.

• Computing is used where it enhances, extends and complements teaching and learning.

• Links between other areas of the curriculum are highlighted in planning and made explicit to the children.

3. Impact

- Most children will achieve age related expectations in science at the end of their cohort year.
- Children will retain knowledge that is pertinent to science with a real life context.
- Children will be able to question ideas and reflect on knowledge.
- Children will work collaboratively and practically to investigate and experiment.
- Children will be able to explain the process they have taken and be able to reason scientifically.

Assessment, recording and reporting

- Marking is carried out in line with the school's policy.
- Assessments are made in line with school assessment procedures. Teachers use Target Tracker to assess and record pupil progress. Each child has a topic overview sheet from Target Tracker which is self-assessed and teacher assessed half termly.
- Optional Rising Stars tests may be used at the end of units in order to monitor ongoing progress.
- Class teachers annotate planning on a regular basis which allows them to plan flexible lessons relevant to the needs of the pupils. This enables the teacher to deliver an effective, relevant curriculum which builds on prior attainment and meets the needs of pupils.

Inclusion and equal opportunities

- All pupils receive quality science teaching and activities are differentiated according to need.
- More able pupils are identified and extended through 'challenge' activities.
- Specific teaching strategies are used to maximise access to the curriculum for pupils learning EAL.
- Gender and race equality is promoted ensuring all pupils have access to all aspects of the curriculum.

Monitoring and evaluation

- Science is monitored by the head teacher, science subject leaders and science governor.
- Having identified priorities, the science co-ordinators construct an Action Plan which forms part of the School Development Plan. This then forms the basis for monitoring and will identify how this is to be implemented.