



HARLINGTON LOWER AND SUNDON LOWER SCHOOL **SCIENCE POLICY**

Approved by Curriculum Trustee Committee: June 2023
Next review: June 2027

Intent statement:

We want our pupils to become inquisitive and explorative about the world around them. We want them to extend their knowledge from the Early Years to wider world learning and to love, respect and investigate their natural world as well as themselves. We want to spark children's interest and love of science so that they question intelligently, learn through discovery and connect scientific knowledge to their world.

PHILOSOPHY

Children are naturally fascinated by everything in the world around them, and teaching science enables them to explore their world and make sense of it; and through this, develop their understanding. Science promotes respect for the living and non-living. It allows children to develop original ideas and a questioning attitude.

We believe that science promotes communication in a specific and precise language involving mathematical and logical thinking. It allows children to develop ways of finding out for themselves and gives them practice in problem solving.

AIMS

- To ensure current National Curriculum statutory requirements are met.
- To provide a broad and balanced curriculum that encourages the acquisition of skills and an understanding of concepts, through firsthand experience where appropriate.
- To encourage curiosity, perseverance, open-mindedness, critical reflection and co-operation.
- To develop a capacity to gather evidence and communicate their scientific questions, ideas and findings in a variety of ways.
- To be able to work safely in a practical situation by the correct usage and storage of equipment
- Encourage children to treat the living and non-living environment with respect and sensitivity
- To retain a sense of the creativity and wonder of Science.

HOW WE PLAN THE SCIENCE CURRICULUM

The National Curriculum currently provides the broad framework for the curriculum as set out in the Long Term Plan. A progression of skills and knowledge document details the skills, knowledge and vocabulary that should be taught in each half term for each year group.

Lesson plans are based on Twinkl plans, Hamilton Trust Plans and the individual teachers' own expertise. The class teacher is responsible for writing the lesson plans. These plans list the specific learning objectives and expected outcomes of each lesson. The class teacher ensures these individual plans are on the learning platform, and they and the science subject leader discuss them on an informal basis.

Science in the Foundation Stage is taught as an integral part of the topic work covered during the year. All work is related to the EYFS curriculum strand Understanding the World and is based on exploration and investigation, and asking questions.

The skills of Working Scientifically are planned and embedded within the context of learning covered in the other programmes of study.

CELEBRATING BRITISH SCIENCE WEEK

Annually we hold a Science Week in the Spring Term. The children access science activities on a daily basis and we invite in an external Scientific visitor / workshop (e.g. Sublime Science, The Explorer Dome).

CLASSROOM ORGANISATION AND TEACHING METHODS

Each teacher uses a variety of whole class, group and individual teaching methods appropriate to the topic and the age range and abilities of the pupils. These include:

- Initial discussion/ brainstorming when a new topic is introduced to assess the extent of the children's knowledge and needs.
- A balance between teacher led planning of investigations and children asking and investigating their own questions.
- Whole class teaching of new skills, vocabulary and knowledge.
- Opportunities for individual observation and investigation.
- All children in Key Stage 1 and 2 will record in a science book and it is expected to keep the use of worksheets to a minimum.
- Outdoor learning opportunities are planned into each half term unit where possible.

RESOURCES

The resources are organised into clearly labelled boxes/drawers with regard to areas covered in individual classes and can be found in the cupboard in the KS2 corridor at Harlington, or the Resources Cupboard at Sundon.

We also make full use of the school site at Harlington 'Wild' area and the wider community of Harlington, including The Spinney.

At Sundon, pond dipping is carried out off site. We also have a well-being area where the pupils are able to observe bugs and birds, and plant flowers and vegetables in special purpose planters. Opportunities for ICT are built into the planning, including the use of data loggers, recording results with cameras, appropriate sites on the internet and DVD.

ORGANISATION AND MANAGEMENT

The Science subject leader/ link teacher orders non-consumable stock yearly, after liaison with staff. Other resources, such as seeds, should be ordered by the class teacher prior to the relevant lessons. The class teacher should request permission to order from the subject leader prior to ordering.

There will be liaison amongst teachers to ensure continuity, progression and a coherence of teaching methods and assessment, including staff from other lower schools, and Arnold and Parkfields Middle Schools.

Resources are stored centrally for whole staff use and it is expected that all staff are responsible for returning items and notifying the subject leader of breakages/shortages.

The subject leader will monitor science through book looks, learning walks, observing lessons, looking at planning, pupil voice, and evaluations, analysing data and talking to colleagues.

ASSESSMENT, RECORDING AND REPORTING

- Assessment for learning is continuous throughout the planning, teaching and learning cycle.
- Each child in each year group has a sheet of 'I can' statements. Teachers will tick off when a child demonstrates consistent attainment of the statement.
- If pupils are meeting the majority of statements by the end of the year, they will be deemed to be meeting the expected level.
- The master grids are saved on the learning platform. Individual teachers are responsible for copying and replacing the sheets when needed.

- Teachers note any whole-class areas of weakness from the assessments and address these accordingly. All classes have an allocated time on their long-term plan that they must use for addressing whole-class misconceptions or for allowing the children to formulate and investigate their own questions.
- 'I can' grids are passed to the receiving teacher to inform them of coverage and ability and an overview copy (showing numbers of pupils working below, working at and greater depth) given to the subject leader. Planning will be based on this information.
- Termly subject evaluations highlight children working below expected outcomes and those working at greater depth.
- Teachers will also carry out initial assessments of class needs on introduction of a new topic.
- Year Two children will be assessed using the Interim teacher assessment Framework (updated 2022). Year 2 assessment will then follow the above procedures, unless there are updated guidelines from the DfE.

HEALTH AND SAFETY:

In regard to science work in school all teachers will be conversant with the 'Be Safe' safety booklet, located in the staffroom. Where appropriate, reminders will be given to children about potential hazards and care of the equipment they are using.

Any trips should have been planned with due regard to the school policy on taking children on outings.



We support children in becoming well rounded individuals where they naturally demonstrate the values of the school in all aspects of their lives.