

Stroud Green Primary School and Rainbow Nursery



Believe and achieve

Stroud Green Primary School, part of a richly diverse community, is a place where all children flourish in a safe, happy and stimulating environment.

Science Policy

Reviewed at Curriculum Committee on 14.01.16

Date of next review: Spring 2018

Science Subject Leader: Evridiki Charalambous

The word science comes from the Latin "Scientia" meaning knowledge.

Vision Statement:

We believe it is important to nurture children's curiosity and inspire them, in a safe, rich learning environment. Children need to be encouraged to discover and to develop positive attitudes and an appreciation of the nature of science. We believe that children have unique ideas, observations and questions about the world around them and therefore we should use these as the foundations for their learning.

Aims:

At Stroud Green Primary we believe that Science is a body of knowledge built up through experimental testing of ideas. Science is also a practical way of finding reliable answers to questions we may ask about the world around us. Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills. We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Our aims in teaching science include the following:

- Preparing our children for life in an increasingly scientific and technological world
- Helping our children acquire a growing understanding of the nature, processes and methods of scientific ideas.
- Helping develop and extend our children's scientific concept of their world.
- Building on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and developing the skills of investigation – including: observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Developing the use of scientific language, recording and techniques.
- Developing the use of computing in investigating and recording.
- Making links between Science and other subjects.

How Science is structured through the school:

Planning for Science is a process in which all teachers are involved to ensure that the school gives full coverage of, 'The National Curriculum programmes of study for Science 2014' and, 'Understanding of the World' in the Early Years Foundation Stage. Science teaching at Stroud Green Primary involves adapting and extending the curriculum to meet all pupils' needs. Where possible, Science will be linked to other curriculum areas or topics. Science will also be taught as discrete units and lessons where needed to ensure coverage. Teachers plan to suit their children's

interests, current events, their own teaching style, the use of any support staff and the resources available.

Foundation Stage (Nursery and Reception pupils):

Pupils explore science topics through making predictions, using their senses and investigating materials and their properties. Science is taught through the strand of, 'Understanding the World'. Science teaching and learning is also linked to the other strands of The EYFS framework for learning, 2014. Teachers and Nursery Officers support pupils to develop a solid understanding of things occurring around them in their day-to-day lives. Staff support children's development through first hand exploratory experiences which include nature walks, magnifiers to explore natural objects, magnets and the manipulation of various materials. Children are encouraged to be creative and inquisitive as they participate in activities, both in indoor and outdoor environments. Pupils are encouraged to use their natural inquisitiveness, while taking part in exploratory play in specific scientific areas as well as areas that link across the EYFS framework.

Key Stage 1 (Y1 and Y2):

During KS1, pupils observe, explore and ask questions about living things, materials and the world around them. They begin to work together to collect evidence to help them answer questions, and to find patterns, to classify and group objects and to research using a variety of sources and carry out fair testing. Pupils use reference materials to find out more about scientific ideas. They share their ideas and communicate them using scientific language, drawings, charts and tables. Science lessons are taught where possible connecting to other curriculum areas. Pupils sometimes use the outdoor areas in their science learning.

Key Stage 2 (Y3 – Y6):

Children are encouraged to extend the scientific questions that they pose and/or answer about the world around them. Pupils carry out a range of scientific enquiries including: observations over time, pattern seeking, classifying, grouping and researching using other sources (including computing resources). Children in KS2 learn to plan science investigations by only changing one variable to make it a fair test. Pupils in KS2 extend their scientific learning using the outdoor areas where possible.

Grouping:

Pupils work individually, in pairs and as part of a small group or whole class. In KS1 and KS2, the pupils are generally taught in mixed ability groups or are grouped according to learning needs based on teachers' on-going gap analysis.

Assessment, recording and reporting:

Assessment will be made against the learning objectives of the revised 2014 National Curriculum and linked to age related expectations for each year group. These are based on teacher observations through each focus area in foundation subjects and through clear formal assessment opportunities for core subjects. Assessment will be in line with the school's assessment policy and this policy should be read in conjunction with this.

In Science we will also assess by:

- talking to the pupils and asking questions
- discussing the work with the pupil
- looking at the work and marking against the learning objective
- observing the pupils carrying out practical tasks
- pupils self-evaluation of their work

Inclusion and Equal Opportunities:

We aim to provide for all children so that they achieve as highly as they can in Science according to their individual ability. We will identify which pupils or groups of pupils are working below expectation and take steps to improve their attainment and progress. Gifted children will be identified and suitable learning challenges provided (see inclusion and SEN policy). Stroud Green has universal ambitions for every child, whatever 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. Our curriculum includes a wide range of texts and other resources which represent the diversity and backgrounds of all our children (see [equal opportunities](#) policy). Science is of great benefit to pupils in the early stages of learning English. As with other practical subjects, pupils can handle the things being talked about, enhancing the teaching of language and develop this skill further. Many activities can be carried out with a minimum language demand, especially those involving making, observing and exploration. Many activities result in a product that allows you to understand the child's thinking even when you do not share a language (drawing, painting, model making, sequencing or ordering physical objects.) Others allow the learning of a practical skill that can be communicated by showing.

Assessment:

Formative assessment is used to guide the progress of individual pupils in Science. It involves identifying children's progress within each area of the Science curriculum, determining what each child has learnt and what should be taught next to support the next stage in his/her learning. Teachers in the course of their teaching usually carry out formative assessment informally.

Suitable tasks include:

- Small group discussions, usually in the context of a practical task.
- Specific arrangements for particular pupils.
- Individual discussions in which children are encouraged to approve their own work and progress.

Summative assessment takes place at the end of each term and at the end of each academic year, when an assessment of the child's attainment is made. This assessment may be carried out through discussion and/or assessment sheets.

Safeguarding and Health and Safety:

Safe practice must be promoted at all times. Teachers must take into account any health and safety and child protection issues. Particular attention must be given to avoiding the use of anything which aggravates individual pupils' allergies.

Risk assessments are carried out to ensure safety issues have been identified and that specific attention is made when activities are unusual and beyond the scope of normal safety practice.

Role of the Subject Leader:

- Support colleagues in the development of their plans, implementation of the scheme of work and the children's learning environment
- Monitor the resources in Science and advise the Head Teacher of any action needed.
- Take responsibility for the purchase and organisation of central resources for Science.
- Keep up to date with developments in the Science curriculum and disseminate information to colleagues as appropriate.
- Monitor the teaching and learning of Science throughout the school – through planning and work scrutiny reviewing data from assessment week/s and report to the Senior Leadership Team
- Facilitate or lead continuing professional development opportunities in Science in line with school priorities.