



Statement of Practice for Science

INTENT

Place of Science in the Curriculum

At St Matthew's, Science is taught in line with the National Curriculum. We recognise that we live in a scientific age and we believe that 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. This fosters in them a respect for living organisms and the physical environment and provides opportunities to experience the awe and wonder of the natural world around us. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. We ensure that the working scientifically skills are built-on and developed throughout children's time at the school so that they can apply their knowledge of science when using equipment, conducting experiments, building arguments and explaining concepts confidently and continue to ask questions and be curious about their surroundings.

Planning

Science is first introduced in the Foundation Stage through play based activities as a part of our carefully planned child initiated and adult initiated provision. 'Understanding the World' encourages children to explore, problem solve, observe, predict, think, make decisions and talk about the world around them. Their learning is supported through offering opportunities for them to use a range of tools safely; encounter creatures, people, plants and objects in their natural environments and in real-life situations; undertake practical 'experiments'; and work with a range of materials.

Throughout Key Stage 1 and Key Stage 2, children will acquire and develop the key knowledge identified in the National Curriculum, as well as developing their working scientifically skills. Units in Science are planned so that they build upon prior learning. Medium term plans that provide further detail on each unit can be found in: W:\CURRICULUM\CURRICULUM INFO and OVERVIEWS\3.

Medium term planning objectives\Science. These are currently in development to provide further detail about the focus, objectives and working scientifically skills for each session.

IMPLEMENTATION

Timetabling/unit planning

Science is taught in planned units by the class teacher. The number of expected sessions for each unit is detailed on the medium-term plan and is reflective of the number of objectives to be covered within each unit.

Overviews of the curriculum units can be found on the school server:

W:\CURRICULUM\CURRICULUM INFO and OVERVIEWS\2. Subject Overviews by subject\Science Overview.

Teaching and learning

The school uses a variety of teaching and learning styles in science lessons. Our primary aim is to develop the children's knowledge, understanding and working scientifically skills. Teachers encourage the children to ask as well as answer scientific questions. As well as gaining first hand experiences, the children have the opportunity to use a variety of secondary sources of information for example the use of books, photographs, graphs, diagrams, models and ICT where it will enhance learning.

Prior to starting a Science topic, key knowledge that children will learn is presented in a knowledge organiser. Children have the opportunity to see the content and vocabulary before starting a unit of work. This enables children to continually revisit the knowledge organiser and monitor their own progress and learning. Links to relevant prior learning are also made.

Working scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. Opportunities to answer scientific questions using the different types of scientific enquiry (observation over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing; and research) are also embedded into each unit. Teachers demonstrate how to use scientific equipment, and the various working scientifically skills in order to embed scientific understanding.

Science affects many aspects of our lives, and links are made to other areas of the curriculum where the link is purposeful. We will also ensure that pupils realise the positive contribution of both men and women from across the globe through finding out about key scientific figures.

Recording of Children's Work

Our curriculum ensures that all pupils take part in practical Science and real world experiences, wherever possible. Only through 'doing' Science can children develop an understanding of the nature, processes and methods of Science, and pose and answer scientific questions about the world around them. In the Foundation Stage, evidence is recorded through the use of our online journals, Tapestry, and in Key Stage 1 and 2, in individual Topic books. 'Come and Look' folders will record any evidence of whole class events or visitors.

Checking for understanding to support teaching and learning

At the end of a unit of work, the teacher makes an informed judgement about the work of each pupil if they have yet to obtain or have met the unit objectives. We use this as a basis for assessing the progress of the child at the end of the year. Evidence may be drawn from observations of pupils at work, questioning, pupils' discussions or oral presentations, pupils' written, pictorial or graphical work and structured worksheets. Throughout lessons, teachers will use a range of activities to check children's understanding; this may include quizzes, questioning, discussion during activities and pupils written work.

Inclusion

All children have equal access to the science curriculum and its associated practical activities. Staff are responsible for ensuring that all children, irrespective of gender, learning ability, physical disability, ethnicity and social circumstances, have access to the whole curriculum and make the greatest possible progress. Where appropriate, work will be adapted to meet pupils' needs and, if appropriate, extra support given. More able pupils will be given suitably challenging activities. Gender and cultural differences will be reflected positively in the teaching materials used.

Supporting Teaching Knowledge

Continuous Professional Development (CPD) is provided for staff to ensure everyone has the correct subject knowledge to deliver a quality curriculum to the children. Some of this is provided on site, some off site. CPD is also provided to further school priorities and spread expertise across the school.

Resources and Budgets

Resources are reviewed annually and replaced and purchased as are needed so that children have appropriate and good quality equipment and other resources to support their learning.

September 2023

IMPACT

Teacher assessment and recording outcomes

Children's learning is assessed at the end of each unit in Science. Teachers will decide which children have met the expected level and who are working towards. This is recorded on INSIGHT (a web-based tracking system) which the subsequent teacher can access.

End of Key Stage assessments

Statutory assessments will be submitted at the end of Year 6.