Priory Infant School

Science Policy

At Priory we believe that the best science teaching fosters and develops pupils' curiosity, passion and enthusiasm for the subject, as well as encouraging them to fulfil their potential. For our pupils to achieve well in science, they need to acquire the necessary scientific knowledge through a variety of engaging, enjoyable and exciting learning opportunities. Children should be supported and encouraged to engage in purposeful scientific enquiry helping them to ask and answer questions about the world around them.

The new National Curriculum 2014 states why we teach science in schools:

'A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics...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.'

Aims

At Priory Infant School we aim:

- to prepare children for life in an increasingly scientific and technological world by encouraging creative responses to scientific ideas
- to develop pupils' enjoyment, enthusiasm and interest in science and develop an attitude of enquiry
- to build on pupils' curiosity and sense of awe of the natural world
- to value children's existing ideas and develop their skills and understanding through first-hand experiences in exploring and investigating
- to introduce pupils to the language and vocabulary of science
- to encourage children to treat the living and non-living environment with respect and sensitivity
- to develop the use of information and communication technology (ICT) in science studies

We aim to do this by:

- delivering high quality, interesting and engaging science lessons
- using scientific contexts to develop and consolidate cross curricular skills in literacy, Maths and ICT
- developing and extending pupils' scientific knowledge and understanding
- developing pupils' ability to work scientifically and involve pupils in planning, carrying out and evaluating investigations
- encourage children to use their scientific knowledge to support them in asking questions as well as answering questions about the world around them
- developing pupils' scientific vocabulary and ability to articulate scientific concepts clearly and precisely
- ensuring that all pupils are appropriately challenged to make good progress in science

- encouraging children to develop a ‘growth mind-set’ when tackling new ideas and challenges within science, and utilize all of their ‘learning powers’

Objectives

At Priory Infant School the objectives will form the basis of our decisions when planning and assessing.

We will encourage children to:

- relate their scientific studies to the real world by using real objects, situations and environments wherever possible
- develop a knowledge of science contained within the programmes of study of the National Curriculum and EYFS Development Matters

Teaching and Learning

At Priory, teachers plan and deliver high-quality and engaging science lessons incorporating a range of teaching and learning styles. At Priory teachers will provide opportunities for pupils to:

- learn about science, where possible, through first-hand practical experiences
- develop their research skills through the appropriate use of secondary sources
- work collaboratively in pairs, groups and/or individually
- plan and carry out investigations with an increasing systematic approach as they progress through the school
- develop their questioning, predicting, observing, measuring and interpreting skills
- record their work in a variety of ways e.g. writing, diagrams, graphs, tables
- read and spell scientific vocabulary appropriate for their age
- be motivated and inspired by engaging and interactive science displays which include key vocabulary and relevant questions
- learn about science using the outdoor learning environment

Planning

- Science in the Early Years Foundation Stage is planned using the EYFS Development Matters, 'Understanding the World'
- Key Stage 1 teachers plan science lessons using the school scheme of work which is based on the new National Curriculum (2014)
- All science lessons have focussed learning objectives, planned through relevant and stimulating activities which support and challenge **all** children's learning
- **'**Working scientifically' is embedded throughout the areas of learning in Key Stage 1 and is assessed through termly investigation units
- Dedicated science investigation weeks/focus days are planned on a rota to encourage and inspire excitement for the subject

Assessment and Reporting

- Science assessment is ongoing and staff are encouraged to use every opportunity to assess and develop the child's level of understanding through observations, discussion, questioning and marking
- In EYFS teachers assess science against the 'Development Matters' statements in the 'Understanding the world' area of the Early Years Curriculum
- In Key Stage 1 children's ability to work scientifically is assessed through termly investigation units linked to topic and formal school assessment frameworks are used to identify children's learning and next steps
- Evidence is collated in Science 'wow' books for whole class and non-recorded science activities
- At the end of each academic year the children will be assessed as 'emerging', 'expected' or 'exceeding' and whole school evidence will be collected for each judgement
- Teachers provide quality feedback to pupils (verbal or written) which clearly identifies successes and next steps

- Teachers report to parents during open evenings and through a final end of year report

Monitoring

- Planning and work book scrutiny as well as pupil voice questionnaires are carried out by the science subject leader and feedback is given to teachers
- Science lesson observations are carried out by the senior leadership team and science leader
- Training is offered to support and improve the teaching of science

Health and safety

- Teachers must plan safe activities for science and complete a risk assessment if necessary.
- Teachers and teaching assistants need to be aware of health and safety procedures when using equipment/food in science lessons.
- Pupils must be aware of the need for personal safety and the safety of others during science lessons.
- The LEA has adopted the ASE book 'Be Safe' as its model risk assessment and therefore this should be consulted when necessary

Principles of teaching and learning

Inclusion

- At Priory teachers ensure that they adopt an inclusive approach to their science planning and teaching; ensuring that pupils of all abilities and backgrounds have an equal opportunity to make good progress and enjoy science.

Cross-curricular skills and links

- Science is part of our everyday lives and we will relate it to all areas of the curriculum.
- We will also ensure that pupils realise the positive contribution of both men and women to science and the contribution from those of other cultures.
- We will not only emphasise the positive effects of science on the world but also include problems, which some human activities can produce.
- We aim to foster a caring attitude towards the world around us and promote active concern for our environment.

Review

This science policy will be reviewed by the science curriculum leader with approval from teaching staff and the senior leadership team.

January 2016
Next review: 2018