



Science Policy

1 POLICY STATEMENT

'A high quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. 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. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.'

The National Curriculum of England, Science 2014.

Children learn to question and discuss science-based issues that may affect their own lives, the direction of society and the future of the world.

2 INTRODUCTION

- This policy outlines the teaching, organisation and management of science taught and learnt at Arnold Mill Primary & Nursery School.
- It is based on the National Curriculum September 2014 for primary school teachers in England (Key Stages 1 and 2) and the EYFS document September 2013.
- The implementation of this policy is the responsibility of all teaching staff.

3 AIMS

At Arnold Mill Primary and Nursery School, we believe that a broad and balanced science education is the entitlement of all children, regardless of their race, gender, aptitude or disability.

Our aim in teaching science is to develop skills such as -

- Children's natural curiosity and develop a scientific approach to problem solving including asking their own questions and seeking answers.
- Open-mindedness, perseverance and responsibility.
- A caring attitude and appreciation of the natural world.
- Confidence and the ability to work in a team or independently.
- A progressive understanding of scientific ideas and processes.
- Investigative skills including observation, sorting, classifying, recording, hypothesising and predicting.
- A variety of communication skills.
- Practical skills and encourage the safe use of scientific resources.

- A deep and lasting interest in science through experiences that are interesting, enjoyable and fun.

We encourage children to be aware of the aims and purpose for a task and how it will help them in future tasks.

4 APPROACHES TO THE TEACHING OF SCIENCE

Science is taught throughout the key stages with curriculum links fostered wherever appropriate. Pupils are taught in their normal classes; through whole class, group and individual approaches, at the discretion of the class teacher. Lessons are taught through a wide range of styles and formats:

- Including VAK activities, to reach all children, whatever their learning style.
- Common tasks are set that are open-ended and can have a variety of responses.
- Resources of different complexity are used to match the ability of each individual child.
- Development of the ability to both ask and answer deep questions is fostered.
- Opportunities for working scientifically are at the heart of our science teaching.

5 SPECIAL EDUCATIONAL NEEDS (INCLUDING G & T)

It is the responsibility of the class teacher to meet the needs of all pupils in their class, including those with special educational needs. Wherever necessary and appropriate, work in science is differentiated to match the individual child. This includes those children who are recognised as having special educational needs and those considered to be gifted and talented. Differentiation may be through the level of work, by the level of support given or by expectations and outcomes.

Please consult Arnold Mill Primary and Nursery School SEN policy for further guidance.

6 PLANNING

- The long term plans, created by the class teachers, map the scientific topics studied in each half term in each class. In classes with mixed year groups, the plans are run as a 2 year rolling programme to ensure coverage of the curriculum. The Science co-ordinator and Headteacher have an overview of the plans to ensure coverage.
- The National Curriculum handbook and the Twinkl Plan-It scheme of work form the basis for our Medium Term planning.
- We carry out our Science teaching ensuring balanced coverage and progression in skills across the school.
- Individual teachers adapt these plans to suit their teaching styles and the needs of the class.
- Outcomes from lessons are used to identify what needs teaching next.
- Planning is monitored regularly to ensure that all requirements of the National Curriculum are met.

7 FOUNDATION STAGE

- We teach Science in Reception and Nursery classes as an integral part of the topic work covered during the year.
- As the classes are part of the Foundation Stage of the National Curriculum, we relate the scientific aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) which underpin the curriculum planning for children aged 3-5.
- Science makes a significant contribution to the objective in the ELGs of developing a child's Knowledge and Understanding of the World, e.g. Materials used to build houses.
- Through working on investigations they learn to estimate and predict, they develop the skills of accurate observation and recording of events. They use numbers and non-standard measures in many of their answers and conclusions.

8 RESOURCES

Resources are maintained by the Science co-ordinator and are stored centrally for easy access (located in the resource room). This includes books, posters and practical resources. If extra resources are needed or stock is broken or running low then the science leader is notified so an order can be placed.

9 THE CONTRIBUTION OF SCIENCE TO TEACHING IN OTHER AREAS

- Wherever possible, Science is planned and taught cross-curricular as part of our creative curriculum. However, where topics do not fit they are taught discreetly.

10 ASSESSMENT AND RECORDING

- We assess children's work in science by making informal judgements against the NC objectives for as we observe them during lessons.
- Work samples will be recorded in the Floor Book in each class or in children's topic books. Written work will be marked as appropriate. Photos and post it notes will be used to record practical and whole class work.
- Teachers make an overall assessment of each child's scientific ability at the end of each year group (on O Track) using data collected from the end of year tests. General progress is reported to parents through the school reports.

11 REPORTING

Feedback to pupils about their scientific progress is given through the marking of work according to the marking policy and through discussions with children as appropriate.

Written reports to parents are made annually. Parents also have the opportunity to discuss progression at Parent's Consultations twice a year.

12 ROLE OF THE SCIENCE CO-ORDINATOR

- To be enthusiastic and knowledgeable about Science and demonstrate good practice.
- To organise and maintain appropriate resources.
- To support staff in the delivery of the science curriculum.
- To coordinate assessment of Science, to facilitate progression.
- To analyse results and feedback to staff.
- To keep up with current development in Science and report back to all staff.
- Work to achieve equality of opportunity throughout the school.

13 HEALTH AND SAFETY

All science is taught in line with Nottinghamshire cc health and safety policy and we risk assess activities. Please consult Arnold Mill Primary and Nursery School Health and Safety policy or the Health and Safety Officer for further guidance.

September 2019

Next due for review: September 2020

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