

# SCHOOL POLICY FOR SCIENCE

<b>Co-ordinator:</b> <b>J. Johnston</b>	<b>Buddy:</b> <b>H. Coleman</b>	<b>Date Adopted:</b> <b>Autumn 2019</b>	<b>Review By:</b> <b>Autumn 2021</b>
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## How the Policy developed

This policy now updates the previous one, as part of a rolling programme of policy development.

## How it relates to the School Development Plan

This policy was identified for review during Summer 2018.  
The Head and coordinator will continue to monitor the policy.

## Key Targets for the Period to the Date of the Policy review

- Ensure implementation of Rising Stars scheme and updated two-year rolling programme
- Evaluate pupils work and progress, and the lesson progression within each unit across KS1 and KS2 through book scrutinies
- Carry out lesson observations in KS1 and KS2 to ensure continuity and progression across the school
- Implement Rising Stars end of unit assessments
- Continue to use initial mind mapping and testing (if appropriate) at the beginning of each unit
- Ensure children and teaching staff are using the updated end of unit assessment sheets, displaying these at the beginning of a unit in books and assessing these using a tick or traffic light system
- To update resources as and when required

<b>Tasks</b>	<b>Action Group</b>	<b>Timescale</b>	<b>Cost</b>
To amend policy with staff	Staff	Sept 2019	NA
To present policy to the Curriculum Committee	Head	Sept 2019	NA
Include Science in lesson observation timetable for staff in KS1 and KS2	Co-ordinator and Buddy	During 2019/20 Ongoing	Supply cover.
To provide resources	Co-ordinator	Ongoing	NA if already in school
To provide support and guidance on assessment materials and other resources to new staff	Co-ordinator	Ongoing	NA
To continue to monitor children's work across the school – Book scrutinies	Co-ordinator/ SMT/Head	One day per term	Half day supply cover for each book scrutiny
To ensure that 2 year rolling programme of planning covers requirements of NC and is cohesive and sequential	Co-ordinator /key stage leaders	Ongoing	NA
To update resources	Co-ordinator	Ongoing	Cost of resources

## Intentions

- To ensure that science is taught sequentially and that the curriculum programme is cohesive
- To maintain a high profile of the subject and acknowledge the value and importance of science across the whole school.
- To provide opportunities for investigational activities in science over a unit of work.
- To help children communicate through the use of scientific language.
- To encourage children to have a positive attitude to Science, developing their natural curiosity of the world around them.
- To help children learn to make informed judgements and decisions through scientific activities.
- To provide children with degrees of challenge, through questioning and scientific investigating.
- To provide all children with access to science activities, including those with special educational needs and those who are seen to be gifted and talented.
- To work towards all children achieving at least National standards, or better, for both KS1 and KS2. Early Years to be secure in the Early Learning Goals at the end of Reception and, in Nursery, working within 40-60 months - accepting that some SEN children may work to other pre-determined standards, depending on their individual starting points.

## Aims and Objectives

### Aims:

- Children to build on prior knowledge, skills and understanding, from the Early Years' Foundation Stage, consistently through the school.
- Children to develop scientific knowledge so that they have a greater understanding of their world.
- Children to be able to work in a scientific way and make decisions and solve problems for themselves.
- Children to enjoy and appreciate the fascination of Science.
- Children to be able to select and use scientific equipment appropriately.
- To continue to build up a resource bank for science.
- To provide children with a passion for science and the skills and knowledge to use within the world.

### Objectives:

- To provide a range of appropriate materials to enable children to make suitable choices.
- To encourage children to be able to communicate their ideas about Science and use appropriate language.
- To give opportunities for children to apply their knowledge and skills through investigations and real life scenarios.
- To teach through investigative and enquiry based methods.
- To apply Science to a range of real life and cross-curricular situations, and consider ethical situations.
- To monitor the direction of the enquiry and to redirect, where necessary, furthering their investigation.
- To provide NS comments which develop scientific understanding, attitudes and organisation of enquiries. Also to challenge pupils or close gaps/address misconceptions.
- To use outdoor learning such as Forest School to enhance learning where possible.
- To ensure coverage of the units from the New Curriculum through Rising Stars scheme.

- To ensure children have necessary prior knowledge in order for new knowledge to be built upon.
- To use a range of assessment strategies, formative and summative, and the Rising Stars end of unit assessments.
- To challenge children to think in greater depth

## **Principles of Teaching and Learning**

We understand the relationship between policy and practice, and that the content of our policy has a direct link to the received curriculum.

### **The Role of the Teacher**

- To organise teaching in a variety of ways best for learning i.e., class teaching, group work, individual learning, teacher led activities or independent investigations.
- To involve children in the processes of thinking, communicating and acquiring skills through new knowledge, reinforcement and consolidation, questioning, planning, predicting, hypothesising, observing, measuring, recording and interpreting, evaluating and reviewing.
- To teach investigative methods using the agreed planning boards and format. To use modelled, intermediate and supported independent investigations as a means of developing the investigative approach.
- To provide a range of illustrative activities and modelled investigations.
- To meet the needs of individuals through differentiated teaching, questioning and activities, using a range of scientific resources and the Rising Stars scheme.
- To teach children to work together co-operatively, taking responsibility for their own work and accepting responsibility for their immediate and wider environment.
- To develop learning through practical activities, and recognising the doing is more often more important than the recording, especially in younger children and in EYFS. Photographic evidence to be used where necessary.
- To ensure a time allocation for Science of 2 hours in Key Stage 1 and 2.25 hours in Key Stage 2.
- To ensure an investigation is incorporated into each topic each half term.

## **Equal Access and Outcome**

Every pupil is entitled to a broad and relevant Science curriculum and, providing access to this for pupils with special educational needs is an important task. We need to give these children opportunities to engage in Science activities and to have their achievements recognised.

We must take account of ethnic and cultural diversity within our school and be aware that not all cultures share our view of Science.

We must consider gender issues when planning Science activities and ensure that both boys and girls are given equal access to Science within school.

We must provide for those that are deemed Gifted and Talented, and present them with suitably challenging activities.

## **Health and Safety**

- We need to remember at all times that children have the right to be safe.
- We will adhere to the school Health and Safety policy.
- We will maintain an awareness of Health and Safety issues both in the activities we plan and the equipment we provide for children.
- Pupils will be taught to use materials, tools and techniques for practical work safely. Children will be closely supervised when using sharp tools, thermometers or candles.
- Children will be made aware that it could be dangerous to put any science materials in their mouths

and to wash their hands after handling materials.

- All electrical equipment is subject to an annual safety check carried out by qualified electricians.
- We take extra care if we plan for work to happen outside school. All visits are properly planned and are checked against the requirements procedure for educational visits. A risk assessment will be completed.
- We will ensure that risks are minimalised when work is planned. A risk assessment will be completed for activities if required. An agreed format for Risk Assessments is stored on the staff shared drive on the school's computer network.

## **Implementation**

Following the acceptance of the policy, all staff will be provided with a copy of the policy electronically.

All staff have a responsibility to implement the policy.

The policy will also be implemented through the use of the Rising Stars scheme and two year rolling programme to meet the requirements of the National Curriculum.

The requirements of the National Curriculum Programmes of Study at KS1 and KS2 are such that teachers should plan opportunities for children to develop their scientific knowledge and skills through:

- Exploring and developing ideas
- Investigating scientific questions and ideas
- Evaluating and reviewing - their work and others
- Observing, comparing, measuring and recording their findings

Nursery and Reception children will follow the guidelines of the EYFS and Early Years Goals (mainly Understanding the World).

Teachers have access to a range of teaching resources available from practical resources, books and posters and also have access to the internet.

## **Continuity and progression**

Aims:

- To provide planning which identifies progression of skills & concepts.
- To ensure lessons within a unit build on prior knowledge.
- To assess and monitor work undertaken in each key stage, with reference to investigational skills. Assessment and record keeping will be in line with school policy and Rising Stars scheme.
- To understand and review how the science curriculum is being delivered (through Rising Stars), its effectiveness and potential improvements to be made.
- Pupils will work towards achievement of the National norm for the end of key stages or beyond if they are able. Early Years to be secure in the Early Learning Goals at the end of Reception and, in Nursery, working within 40-60 months - accepting that some SEN children may work to other pre-determined standards.
- To teach investigative methods using the agreed planning boards at least once per unit each half term. To use modelled, intermediate and supported independent investigations as a means of developing the investigative approach.

## **Resourcing**

The majority of resources are kept on the KS2 site.

The annual budget will be spent on consumables and to provide new materials wherever needed. FOSLS will be approached for the purchase of larger items.

## **Assessment and Reporting**

Book samples will be sent to the co-ordinator to identify levels of attainment and kept for one academic year.

Teachers will make regular assessments after Units of Study which will be used to update I-track.

Children's progress and achievements will be reported on in the annual children's report and also Parent Evenings. Teachers will update I-track once a term.

## **Summary**

Science for Primary children means exploring, discovering and investigating the world around them. Our aim is to offer activities that help children to gather the experiences they need to understand their world.

Science forms an integral part of children's school and everyday life, as such they should be given opportunities to experience and learn first hand through their own investigations and observations. Forest school also provides opportunities for our Nursery and foundation stage to explore scientific concepts

Our teaching will offer opportunities for children to develop knowledge and understanding of important scientific ideas, processes and skills, which is built upon prior knowledge. They will learn how to communicate their ideas and explore values and attitudes through science.

Science teaching should contribute to raising achievement in Literacy, Speaking and Listening, Numeracy and Computing. It should also contribute to the children's personal, health, social, spiritual and cultural development and be taught in a cross-curricular way where possible.