



## Squirrel Hayes First School

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|---|---------------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Policy Reviewed on                      | Feb 2017      | Feb 2018      | Feb 2019          | Feb 2020          | Feb 2021          | Feb 2022          | March 2023        | March 2024        |
| Policy Owner Signature                  | Mrs F. Taylor | Mrs F. Taylor | Mrs Johnson Allen | Mrs Johnson Allen | Mrs Johnson Allen | Mrs Johnson Allen | Mrs Johnson Allen | Mrs Johnson Allen |
| Policy adopted by the Governing Body on | March 2017    | March 2018    | March 2019        | March 2020        | March 2021        | March 2022        | March 2023        | March 2024        |
| Policy Reviewed Date                    | Feb 2018      | Feb 2019      | Feb 2020          | Feb 2021          | Feb 2022          | March 2023        | March 2024        | March 2024        |
| Version                                 | 07            | 08            | 09                | 10                | 11                | 12                | 13                | 14                |

# Science Policy

This school is committed to safeguarding and promoting the welfare of children and young people/vulnerable adults and expects all staff and volunteers to share this commitment.



## Science Policy

### Intent

Our intention when planning and delivering the science curriculum at Squirrel Hayes First School is to inspire sustained curiosity in the subject that will help each learner to understand the complex world around them and to be driven to find out more!

We aim to prepare our learners for life in an increasingly scientific and technological world. Science will be taught through the driver of discovery.

The teaching of critical scientific knowledge, exploring science through hands on experiences and understanding the importance of scientific discovery in the past and in the future will be at the heart of Science teaching and learning.

It is our intention that, through investigative science, learners will continue to deepen their respect for the natural world and all its phenomena, and increase their care and appreciation of it.

- Develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics;
- Develop pupils' enjoyment and interest in science
- Develop an appreciation of its contribution to all aspects of everyday life
- Build on pupils' curiosity in, and sense of awe at, the natural world
- Use a planned range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of science
- Introduce pupils to the language and vocabulary of science
- Develop pupils' basic practical skills and their ability to make accurate and appropriate measurements
- Promote a 'healthy lifestyle' in our pupils.

**Statement of Implementation**

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following;

- Science will be taught in planned and arranged topic blocks by the class teacher. This is a strategy to enable the achievement of a greater depth of knowledge.
- We build upon the learning and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- 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. This is developed through the years, in-keeping with the topics.

**Statement of Impact**

The successful approach at Squirrel Hayes results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the world. Through various workshops, educational visits and interactions with experts, children have the understanding that science has changed our lives and that it is vital to the world's future prosperity. Children learn the possibilities for careers in science as a result of our community links and connection with national agencies such as the STEM association. Pupil voice is used to further develop the Science curriculum, through questioning of pupil's views and attitudes to Science to support the children's enjoyment of science and to motivate learners.

### **Every Child Matters:**

- In accordance with the Children's Act 2004, schools now have a duty to provide the outcomes outlined in 'Every Child Matters.'
- During Science lessons, children are kept safe from danger by ensuring that all equipment is checked regularly and stored carefully. The staff are mindful of children who have allergies to certain foods and substances when they are involved in experiments or food tasting sessions. They are taught the correct ways to handle equipment and to work collaboratively.

### **Curriculum Organization:**

The school has developed its own scheme of work based on the National Curriculum and incorporates aspects of the Chris Quigley Essentials Programme of study. We use the keys skills and develop them within a Creative curriculum and reinforce cross-curricular links including literacy, numeracy and ICT.

### **Pupil Objectives:**

These will be set out in the Chris Quigley Essentials Programme and will allow for clear progression.

They will be taken from the National Curriculum Attainment levels.

### **Continuity & Progression**

In order to ensure progression and continuity throughout the school and to ensure the delivery of a broad and balanced curriculum the school has developed a curriculum overview. The teaching of Science is organized so that children cover topics that link to the Creative Curriculum Overview. The various schemes of work also reflect the age and ability of children when topics are taught.

**Early Years:** In the Early Years Science is included in 'Understanding the World' and elements are referred to as 'The World' and 'Technology'. The children in Nursery and Reception classes are provided with a broad range of opportunities and experiences through which they may work towards the Early Learning Goals:

- To investigate objects and materials by using all of their senses as appropriate;
- To find out about and identify some features of living things and events they observe;
- To look closely at similarities, differences, patterns and change and to ask questions about why things happen and how things work.

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- To complete a simple program on a computer.
- To use ICT hardware to interact with age-appropriate computer software.
  
- KS1 & KS2

The scheme of work covers the Programmes of Study and builds on the knowledge and skills acquired in the Foundation Stage. The scheme links to the Creative Curriculum Overview and cross-curricular links are sought wherever possible.

### **Equal opportunities/Multicultural Education:**

All pupils have equal access to the Science curriculum and resources and all staff follow the equal opportunities policy. The schemes of work are used to provide differentiation by outcome and intervention. As with all resources we ensure software is not gender or culturally biased. Able & Talented children will be identified and extension activities or additional challenges be provided.

### **Special Educational Needs:**

We believe that all children have the right to access Science. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the Science curriculum for some pupils. Where appropriate ICT can be used to support SEN children on a one to one basis where children receive additional support.

### **Role of Curriculum Leader:**

The role of the leader can be summarized as follows:

- To take the lead in policy development and the production & adapting of schemes of work.
- To monitor the effectiveness of the teaching and learning of Science, both in the planning stage and in its delivery.
- To help raise attainment in science through effective, assessment, monitoring and interventions.
- To be available to support colleagues and to purchase and organise resources.
- To deliver appropriate professional development training to all staff.
- To attend relevant training events and network meetings, keeping up to date with Science developments and to advise colleagues appropriately.
- To liaise with other teaching staff regarding opportunities for children to participate in activities outside the school e.g. Science days & special events.

**Strategies for Teaching & Learning:**

Science is currently taught in school through Science based topics and every attempt is made to link to the Creative Curriculum Overview. Children may be taught as a whole class, work in a group or individually. The groups may be of mixed or matched ability. Activities are personalised for different ability levels and children with SEN will be supported within the classroom. There is both knowledge based and investigative science taught in all classrooms. Wherever possible the schools outside areas and other local environments are used to assist the study of Science.

**Health and Safety**

All teachers, children and other adults in school are expected to be aware of the need for safe working at all times. Risk Assessments are in place for individual class- rooms, pupils and activities. Children are involved in the writing and assessment of risk in order to be fully aware of the need for safety. Both adults and children should be made aware of these and follow them appropriately. If any of these groups are unsure of anything then they should consult with the Science Leader for help and advice.

This **Health and Safety** statement will be reviewed annually.

**Cross Curricular Links**

Science has many links to other areas of the curriculum. These include:

- Literacy - reporting on experiments/presenting conclusions /information texts
- Maths - showing data results in graphs and measurements/ using a range of measuring scales in investigations
- Music - vibration, tone and pitch
- ICT - using as a tool for research, data logging, simulating experiments, data handling, to practise and reinforce skills and to develop word processing and other presentation skills.
- P.E. - using exercise to show changes in the body and to investigate forces
- DT - using scientific knowledge to manufacture and refine projects, e.g. musical instruments.

**Parental Involvement:**

Parents are encouraged to support the implementation of Science where possible by encouraging use of Investigation and Enquiry Skills at home during home-learning tasks. They will be made aware of health & safety issues and encourage to promote these at home.

**Liaison outside our school:**

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We aim to utilize and build on the expertise of the wider community, Science Organizations, Science Related Employers, and Science Leaders in other schools and professional support services to develop and improve the Science curriculum at Squirrel Hayes First School.

### **Assessment and Recording & Reporting:**

Pupil achievement in the EYFS is recorded and measured against Development Matters statements and the Early Learning Goals, and this is passed to KS1 teachers for formative planning. (Note - the Early Learning Goal statements do not correlate directly with KS1 levels, although the school has agreed that learners achieving Expected progress or above against the ELGs will be working towards Year 1 Objectives).

In KS1 & KS2 the National Curriculum Attainment Targets set out the knowledge, skills and understanding that the pupils are expected to have by the end of each key stage. Each child's progress is recorded on a tracking sheet using the 'Chris Quigley Skills' to ensure progression and coverage. Teachers regularly assess capability through observations and looking at completed work. During Star week (assessment week) teachers will complete an assessment grid for each child based on observations of activities & work.

### **Evaluation and Review**

We see our policy as a working document and we plan to review this policy periodically.

### **DOCUMENT CHANGE LOG**

| Version No. | Date of review | Reviewer      | Changes Made  |
|-------------|----------------|---------------|---|
| 01          | 2.12.10        | D Guy         | Formulation of new policy   |
| 02          | 2.2.11         | David Guy     | Assessment & Record Keeping   |
| 03          | 08.03.12       | Kate Follett  | Change to grammar and wider community links   |
| 04          | 04.03.13       | David Francis | Grammar corrections, alterations to include 2013 Development Matters EYFS               |
| 05          | 16.1.14        | David Francis | Syntax & Grammar, Reference to current practice in anticipation of the 2014 NC changes. |

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| Version No. | Date of review | Reviewer            | Changes Made   |
|-------------|----------------|---------------------|--|
| 06          | 27.2.14        | Sophie Cawdell      | New NC Aims 2014 and Chris Quigley Esesentials Programme of study objectives and assessment. |
| 07          | 08/02/17       | Fay Taylor          | No changes made  |
| 08          | 12.2.18        | Fay Taylor          | Changes highlighted in green   |
| 09          | 1.3.18         | Helen Johnson-Allen | Reviewed   |
| 10          | 22.2.20        | Helen Johnson Allen | Intent, implementation and impact.   |
| 11          | 5.3.21         | Helen Johnson Allen | Reviewed.  |
| 12          | 4.2.22         | Helen Johnson Allen | Reviewed.  |
| 13          | 23.3.23        | Helen Johnson Allen | Reviewed   |
| 14          | 13.3.24        | Helen Johnson Allen | Reviewed   |

**Signed:****Date:****Head Teacher**