

# Little Stoke Primary School

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## Science Policy

Signed:	Anne Sargent (Head Teacher)	
	Lesley Machin (Staffing & Curriculum Committee Chair)	
Last Review	June 2019	
Next Review	June 2021	

## 1. Our Vision

At Little Stoke, great Science teaching and learning incorporates our whole school vision to **Dream-Plan-Achieve** through:

- **Dream**-practical, hands-on experiences that will ignite children's curiosity and foster independent learning and self-belief.
- **Plan**- giving children the confidence to ask questions that fuel explorations and discoveries about the world around them so that they have a deeper understanding of the universe we live in.
- **Achieve**- excitement, fun, and inspiration where children will experience the joy of learning 'how' and 'why' delivering the Eureka moment!

Our aim is that these stimulating and challenging experiences help children secure and extend their scientific knowledge and vocabulary and, by doing this, ensuring every child is making progress as a scientist.

We believe that these opportunities will ensure that our children are motivated, confident, life-long learners who will continue to explore the world around them, way beyond their time at primary school.

## 2. Rationale

Science is a systematic investigation of the physical, chemical and biological aspects of the world which relies on first hand experiences and on other sources of information. The scientific process and pupils' problem-solving activities will be used to deepen their understanding of the concepts involved. The main aspects of science to be studied will be determined by the programmes of study of the National Curriculum 2014.

Through science pupils at Little Stoke Primary School will continue to deepen their respect, care and appreciation for the natural world and all its phenomena.

## 3. Aims

- to develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life
- to build on pupils' curiosity and sense of awe of the natural world
- to use a planned range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of science
- to introduce pupils to the language and vocabulary of science
- to develop pupils' basic practical skills and their ability to make accurate and appropriate measurements
- to develop pupils' use of computing in their science studies.
- to have access to established STEM links with local industry that support learning.

## 4. Objectives

The following objectives derived from the above aims will form the basis of our decisions when planning a scheme of work. Assessment will also be related to these objectives:

### 4.1 To develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life.

- to develop a knowledge and appreciation of the contribution made by famous scientists to our knowledge of the world including scientists from different cultures

- to encourage pupils to relate their scientific studies to applications and effects within the real world
- to develop a knowledge of the science contained within the programmes of study of the National Curriculum.

#### **4.2 To build on pupils' curiosity and sense of awe of the natural world**

- to develop in pupils a general sense of enquiry which encourages them to question and make suggestions
- to encourage pupils to predict the likely outcome of their investigations and practical activities

#### **4.3 To use a planned range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of science**

- to provide pupils with a range of specific investigations and practical work which gives them a worth-while experience to develop their understanding of science
- to develop progressively pupils' ability to plan, carry out and evaluate simple scientific investigations and to appreciate the meaning of a 'fair test'.

#### **4.4 To introduce pupils to the language and vocabulary of science**

- to give pupils regular opportunities to use the scientific terms necessary to communicate ideas about science

#### **4.5 To develop pupils' basic practical skills and their ability to make accurate and appropriate measurements**

- to develop the ability to record results in an appropriate manner including the use of diagrams, graphs, tables and charts
- within practical activities give pupils opportunities to use a range of simple scientific measuring instruments such as thermometers and force meters and develop their skill in being able to read them.

#### **4.6 To develop pupils' use of computing in their science studies**

- to give pupils opportunities to use ICT (video, digital camera, data logger) to record their work and to store results for future retrieval throughout their science studies
- to give pupils the chance to obtain information using the internet.

#### **4.7 To have access to established STEM links with local industry that support learning.**

- to use links with local industry which explore how pupils, particularly girls, can be inspired and engaged within primary school.
- to arrange visits that link to and support the delivery of the 2014 Science national Curriculum.
- to raise engagement levels of parents in science based learning.

### **5. Equality of opportunity**

In line with our Inclusion policy we aim to give all children equal access to the curriculum by embedding learning in contexts that are relevant to the children. The study of science will be planned to give pupils a suitable range of

differentiated activities appropriate to their age and abilities. Tasks will be set which challenge all pupils, including the more able. For pupils with SEN the task will be adjusted or pupils may be given extra support. The grouping of pupils for practical activities will take account of their strengths and weaknesses and ensure that all take an active part in the task and gain in confidence.

## **6. Breadth and Balance:**

Pupils will be involved in a variety of structured activities and in more open-ended investigative work:

- activities to develop good observational skills
- practical activities using measuring instruments which develop pupils' ability to read scales accurately
- structured activities to develop understanding of a scientific concept
- open ended investigations.

On some occasions pupils will carry out the whole investigative process themselves or in small groups.

## **7. Relevance**

Wherever possible science work will be related to the real world and everyday examples will be used.

## **8. Cross-curricular skills and links**

Science pervades every aspect of our lives and we will relate it to all areas of the curriculum. In our topic-based teaching approach, we use cross-curricular links to science wherever we can. Science relates especially well to curriculum subjects such as literacy, mathematics, ICT and design and technology.

## **9. Time Allocation**

Science topics are studied every half term and taken from the school's Long-Term Plan. Science is taught in KS1 AND KS2 for 1 hour every week or at least every fortnight for an extended session of at least a whole afternoon.

Foundation Stage science is taught through the EYFS curriculum.

## **10. Continuity and Progression**

Foundation Stage pupils investigate science as part of Understanding of the World. Children are encouraged to investigate through practical experience; teachers guide the children and plan opportunities that allow the children to experience and learn whilst experimenting for themselves. By careful planning, pupils' scientific skills and knowledge gained at Key Stage 1 will be consolidated and developed during Key Stage 2.

Pupils in Key Stage 1 will be introduced to science through focused observations and explorations of the world around them. These will be further developed through supportive investigations into more independent work at Key Stage 2. The knowledge and content prescribed in the National Curriculum will be introduced throughout both key stages in a progressive and coherent way.

## **11. Health and safety**

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class Teachers and Teaching Assistants will check equipment regularly and report any damage, taking defective equipment out of action. Health and Safety issues in teaching science are of the utmost importance and guidelines are discussed and updated regularly at staff meetings. Particular risks are indicated in teachers planning and we follow the safety guidelines published by the ASE and CLEAPSS: [www.cleapss.org.uk/prifr.htm](http://www.cleapss.org.uk/prifr.htm)

## **12. Assessment for Learning, recording and reporting**

Throughout the school teachers will assess whether children are working towards/at/above the expected level for their age based on their understanding and application of the content of the National Curriculum 2014. Practical assessments provided by the Teacher Assessment in Primary Science (TAPS) project will be carried out within each unit to ensure progression of Working Scientifically skills. End of unit 'Quick Quizzes' will be used to inform teachers' assessment at the end of each unit of study. Progress and attainment is reported to parents through parents' evenings and end of year reports.

## **13. Marking for Improvement**

Much of the work done in science lessons is of a practical or oral nature and, as such, recording will take many varied forms thus making marking different. It is, however, important that written work is marked regularly and clearly, as an aid to progression and to celebrate achievement. When appropriate, pupils may be asked to self-assess or peer assess their own or other's work. Marking for improvement comments in a child's book are relevant to the Science learning objective to help children to better focus on future targets.

## **14. Role of the subject Leader**

Science will be led by Donna Southcott and will be an annual focus for a staff meeting. Standards of teaching and learning will be monitored using planning scrutiny, work sampling, observations, pupil conferencing and data review.

## **15. Resourcing (See Science Resource Policy)**

Science resources aim to encourage investigative science. Resources are stored in labelled boxes in the resource room. Science software is installed on the school's network to allow teachers and children access. Resource needs are audited regularly and purchases made to maintain level of resources and to replace consumables. Teachers should see the science subject leader if they are aware of gaps in resource provision or if they need something specific.

## **16. Review**

This science policy will be reviewed every two years by the science curriculum leader and the senior management team.