Treeton Church of England Primary School
POLICY FOR SCIENCE (incorporating Food Technology)

Subject Co-ordinator: Katie Collins
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'This policy reflects the statutory guidance issued through the National Curriculum (2014). All policies have been written to ensure that these points of study are covered in this policy, and expanded on where necessary to develop the school's own, individual curriculum. This curriculum is based heavily on thoughtful first hand experiences, creative endeavours with these experiences and an inherent connection to the children of Treeton school, their needs and backgrounds. Additionally, it has been designed and patterned to ensure that children maximise their progress in school and are given the opportunities to widen their learning and aim for even higher levels of study.
It has been carefully designed to meet the needs of the school's values, vision and ethos with the new curriculum in mind.'

1. INTRODUCTION
This policy outlines the teaching and management of the Science curriculum delivered at Treeton C of E Primary School. The school's policy for Science is based on the National Curriculum for Key Stages 1 and 2. We believe science makes an increasingly important contribution to all aspects of life and therefore is of immense value for our children. All children are naturally curious about their environment and science makes a valuable contribution to their knowledge and understanding of the world. The policy has been drawn up to reflect our whole school approach to science and has been discussed with staff and has the agreement of the Governing Body. The implementation of this policy is the responsibility of the teaching staff.

AIMS
• Develop knowledge and understanding of important scientific ideas, processes and skills and relate these to everyday experiences.
• Be curious about the things they observe, experience and explore relating to the world around them.
• Use their experiences to develop understanding of key scientific ideas.
• Use models to represent things that they cannot directly experience.
• Acquire and refine practical skills necessary to investigate ideas and questions safely.
• Develop skills of sorting, classifying, planning, predicting, questioning, inferring, concluding and evaluating through investigative activities.
• Make informed decisions based on evidence and their own experiences, and be able to apply scientific knowledge to new situations.
• Practise mathematical skills (counting, ordering numbers, measuring, drawing and interpreting graphs and charts) in real contexts.
Develop effective ways of thinking, finding out about and communicating scientific ideas and information.
• Think creatively about science and enjoy trying to make sense of phenomena.
• Develop their own ideas on how to investigate an idea or phenomena.
• Develop language skills through talking about their work and presenting their ideas using writing of different kinds.
• Use progressively technical scientific and mathematical vocabulary and draw diagrams and charts to communicate scientific ideas.

• Use a range of media and secondary sources, including ICT to extract scientific information.
• Explore values and attitudes through science.
• Work with others, listening to their ideas and treating these with respect.
• Develop a respect for the environment and living things and show they understand how human activity impacts these things.
• Develop responsibility for their own health and safety and that of others when undertaking scientific activities.

2. TEACHING SCIENCE

Teaching Time

Time spent on science teaching may vary from term to term and in each topic that is taught. All teaching staff choose at their own discretion how they allocate the amount of time needed to cover the strands of the National Curriculum.
Science teaching may be taught through a variety of topics or take place out of topics, as stand-alone lessons or as blocked periods. The responsibility of ensuring adequate coverage of the National Curriculum for Science lies first with the subject coordinator but ultimately the individual teacher. At Foundation Level, science is an integral part of topic work and will be taught in a cross curricular way through the seven areas so that pupils can develop and apply their scientific skills.

Class Organisation

In each year group, Science is taught in an imaginative and largely practical and investigative way. The children benefit from whole class or group teaching as well as being encouraged to work individually: finding out information, practising skills, or thinking scientifically by themselves.

A Typical Lesson

Science lessons have no imposed formal structure but may contain the following elements:
Discussion: what they already know from experience, what they have learnt so far, what they will be finding out about next.
Teaching: directly to the whole class or through group or individual work.
Practical tasks or investigative work: working in groups or individually, practising scientific skills, finding out answers, being encouraged to think scientifically.
Recording: writing about what they have found out, drawing charts and tables and diagrams, using the computer and other media to record what they have done or found out about.
Communicating: sharing ideas, knowledge and what they have found out about with each other, the teacher, other classes and adults.

Science lessons will provide opportunities for the children to develop scientific skills, knowledge and understanding according to the National Curriculum. In addition, Science lessons should be a vehicle to motivate children to extend their learning beyond the classroom.
Although no formal regular homework is given in this subject area, teachers will encourage children to find out information and practise scientific skills out of school time. In addition, teachers will provide opportunities to share and value the children's efforts outside school, within future lessons.

Cross Curricular Links

Science contributes to many subjects within the primary curriculum and opportunities will be sought to draw scientific experience out of a wide range of activities. Science is often taught thematically through a variety of topics that may be based on Science or any other subjects taught in each Year Group's

two year rolling program. This will allow children to begin to use and apply scientific skills and knowledge in real contexts.

Environmental Education

Environmental Education forms an integral and vital part of the science curriculum. Within the scheme of work, individual units naturally lend themselves to developing the children's knowledge, understanding, concern and care for the environment.

As a result of teaching about the environment, every encouragement is given to the children to apply the principles of energy efficiency, water conservation, waste reduction and recycling and litter control. Recycling is actively encouraged throughout the school and every classroom for example recycles paper.

Additionally, there are many opportunities within science and other areas for children to learn about the choices they have and the impact that they can make on their environment.

3. SCHOOL AND CLASS ORGANISATION

How we cater for pupils who are more able.

More able children will be challenged and motivated by differentiated work given by the teacher appropriate to his or her needs. Teachers will also use questions that allow the more able child to maintain their involvement in the lesson and demonstrate their knowledge and abilities.

How we cater for pupils with particular needs

Most Science lessons are appropriate for all children since the teacher will differentiate as necessary for those children with specific needs. Liaison with the special needs coordinator will sometimes be necessary. Teachers will aim to include all children in Science lessons. All children will benefit from aspects of the lesson, such as discussion, and other children communicating and sharing ideas. However, a pupil whose difficulties are severe or complex may need to be supported by a special needs assistant in addition to appropriately differentiated tasks given by the teacher.

How we work in the Foundation Stage

Science activities are planned in line with the Early Learning Goals using the Development Matters Documentation.

The Disability Discrimination Act

The Disability Discrimination Act requires schools to promote equality of opportunity for all pupils. In Science we will meet this duty by:

- Increase the extent to which disabled pupils can participate in the school Curriculum.
- Improving the learning environment to increase the extent to which disabled pupils can participate and take advantage of the Science curriculum.
- Improving the delivery to disabled pupils of information which is provided in writing for pupils who are not disabled.

The effectiveness of our policy and practice on the educational opportunities available to and achievements of disabled pupils will be judged through termly monitoring by the Science Coordinator.

Resources

Science equipment to be used across the age range and resources related to the environment are stored in the Library or the Science Co-ordinators classroom cupboard.

Health and Safety

In their planning of activities, teachers will anticipate likely safety issues. They will also explain the reasons for safety measures and discuss any implications with the children. Children should always be encouraged to consider safety for themselves, others, the environment and the resources they use, when undertaking scientific activities.

Computing

Computing will be used in various ways to support teaching and learning. The interactive whiteboard (IWB) is a useful tool for delivering a range of teaching aids and can be used to support activities and enhance the learning of scientific concepts are detailed in teachers' Children as well as the teacher will be involved in using the IWB not simply using it as a big screen.

In addition, teachers may use some of the freely available resources on the internet which allow for effective teaching of Science, including virtual experiments, interactive games and multimedia clips to enhance their lessons.

Planning

The planning of Science remains the responsibility of the individual teacher but teachers are expected to follow their key stages 2 year rolling programme.

Assessment

Assessment is carried out against the National Curriculum through teacher monitoring and end of unit assessments. These levels are imputed termly and tracked using Eazmag to monitor and evaluated impact.

Learning Environment

Each classroom will contain a specific Science area, which will include current progressive vocabulary, questions and interactive resources to support understanding and develop independent enquiry.

4. MANAGEMENT OF SCIENCE

Role of the Coordinator

- To be a role model and demonstrate good practice.
- Keep the written policy document and scheme of work up to date and evaluate the content and method.
- Encourage and support staff in the implementation of the agreed procedures and closely monitor the progression of activities and consistency of approach across both year groups and Key Stages through lesson observation.
- Arrange INSET as appropriate to meet the needs of individuals and the school.
- Purchase and organise all Science resources, ensuring they are readily available and well maintained.
- Monitor teachers' planning as part of on-going subject monitoring and evaluation of practice.
- Compile portfolios of children's work to evidence progression.
- Facilitate parental involvement by organising workshops and events, for example, Science Week.
- Liaise with other post holders to ensure coherence across subject areas.
- To be aware of national and local developments through reading relevant materials and attending courses as appropriate.
- Submit regular feedback on standards in Science to the SMT.
- Submit an annual written report each Summer Term, which informs the Governing Body of progress in this area towards targets in the Development Plan, also of issues raised as a result of co-ordinator monitoring visits.
- Work to achieve equality of opportunity throughout the school.

Role of the Head Teacher

- Monitor the implementation of the Science Curriculum, including the quality of teaching in classrooms.
- With the science governor, keep the governing body informed abut the progress of the subject.
- Ensure that science remains a high profile in the school's development work.

FOOD TECHNOLOGY

Food Technology is part of the wider subject 'Design Technology' but science provides an opportunity to learn about the types of food available, their nutritional composition, digestion and the function of different nutrients in contributing to health, and how the body responds to exercise. It also provides the opportunity to learn about where food comes from and apply healthy-eating messages through practical work with food, including preparation and cooking.

This policy links closely with the Design & Technology, the Teaching and Learning Policy, Marking & Feedback, Assessment & the Curriculum Policy.