

Ellington Primary School



Science Policy Statement

Introduction

Science at Ellington Primary School is about developing children's ideas and ways of working that enable them to make sense of world in which they live, through investigation and using and applying process skills. The national curriculum states 'High quality science education provides the foundations for understanding the whole 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.'

Aims of Science at Ellington Primary School

At Ellington Primary School we hope to:

- Develop a positive attitude to Science by presenting it as an enjoyable, interesting and attractive subject.
- Develop children's confidence in their own ability to develop and extend their understanding of science and encourage them to ask deeper questions about the world around them.
- Develop their ability to think clearly and logically with independence of thought and flexibility of mind.
- Enable children to become effective communicators of scientific ideas, facts and data whilst becoming experts at analysing the data they collect.
- Encourage persistence through sustained work in science that requires perseverance over a period of time.

Objectives

To provide a wide range of experiences and tasks appropriate to the needs of the children, so allowing them to develop:

- observational skills
- measuring skills
- predicting skills
- hypothesising skills
- experimenting skills
- communication skills
- interpreting skills

Subject Content

Our science content is based on the National Curriculum. See Curriculum Overview (Appendix 1) and the content is mapped out on our Progression of Skills document for EYFS (Appendix 2) and Progression of Skills document for KS1 and KS2 (Appendix 3).

Special Educational Needs and Higher Attainers

- Teaching needs to meet the needs of all children
- Children with special educational needs need to have differentiated activities which allow them to access the curriculum fully and make progress
- The planning should clearly indicate the objectives these children are working on
- Planning should be sufficiently differentiated to cover their needs
- Practical resources will be available to all children

Early Years Foundation Stage

Foundation Stage pupils are taught science as an integral part of the Understanding the World work covered during the year. Pupils are encouraged to develop their problem solving, reasoning and understanding of science in a broad range of contexts in which they can explore, learn, enjoy, practise, discuss and extend their skills. Pupils are encouraged to develop their scientific potential in both indoor and outdoor environments; with a combination of teacher and child led activities. They are provided with a wide range of activities that promote regular active participation, exploration of real life problems, development of imaginative play and early experience of scientific language. All pupils are supported positively and encouraged to gain confidence and competence in their scientific skills.

Planning

Planning in Science is a process in which all teachers are involved to ensure that the school delivers full coverage of the current National Curriculum and Foundation Stage. The topics set out to provide a vehicle to teach the skills in Knowledge and Understanding and Working Scientifically. Teachers adhere to the progression of skills document when planning lessons to ensure progression between year groups (Appendix 2 and 3). Teachers adapt and modify planning to suit the children's needs, their style of teaching, use of support staff and resources available.

Delivery of lessons – EYFS and Key Stage One teach Science for a minimum of one and a half hours per week.

– Key Stage Two teach Science for a minimum of two hours per week.

(Planning should make cross-curricular links wherever possible)

Teaching and Organisation

Science is approached through a process of investigation, problem solving and enquiry. A variety of teaching styles can and should be used:

- Modelling by the teacher
- Problem solving and investigation
- Practical work to advance and consolidate scientific knowledge and skills
- Whole class and group work
- Mixed ability groups
- Ability groups
- Independent work

Teaching Assistants

Time should be set aside prior to the lesson to discuss with the teaching assistant the learning objectives, the activities and their role in the children's learning. Teaching Assistants should be used to support the learning of children throughout the whole of the science session. During the lesson they can: support a child/ group to ensure good understanding of objective being taught. Teaching Assistants need time at the end of the session to discuss the work of the child/children they have supported with the teacher.

Classrooms and Display

To reinforce and support the children's learning, all classrooms should display key vocabulary for the science topic taught so that the children can refer to it to aid their understanding and knowledge. Displays, wherever possible, should demonstrate cross-curricular links to reinforce learning in all curriculum areas.

Health and Safety

Pupils will be taught to use scientific equipment safely when using it during practical activities. Teacher and Teaching Assistants will check equipment regularly and report any damage, taking defective equipment out of action. A simple risk assessment will be carried out for all practical activities; any perceived hazards will be reported to the Head Teacher who will determine the appropriateness of the said activity.

Assessment

Summative and formative assessment will be collected throughout and at the end of each science topic. Grades of WTS (working towards), EXS (expected), GDS (greater depth) will be given. Pupils in EYFS are monitored throughout the year using the Early Years Foundation Curriculum and against the ELG at the end of the year using the EYFS Profile.

Marking and Feedback

Good feedback should:

- Praise the child
- Celebrate success of children through rewards and celebration assemblies
- Explain what the child has done well and what they have achieved/learned
- Extend the learning that has already taken place through questioning
- Clarify any misconceptions
- Be a dialogue between the teacher and the child
- Provide an opportunity to assess a child's progress and inform assessment and planning

Role of Subject Leader

The subject leader is responsible for improving the standards of teaching and learning in Science through:

- Monitoring and evaluating pupil progress
- Analysing data
- Ensuring breadth and balance of the curriculum is achieved
- Taking the lead in policy development
- Supporting colleagues in their continued professional development (CPD)
- Purchasing and organising resources
- Reporting to governors and senior leadership team
- Providing guidance, support and training for parents and carers
- Keeping up to date with recent curriculum developments