

Science Policy

Introduction

Science teaches an understanding of natural phenomena. At Roebuck Academy we aim to stimulate children's curiosity in finding out why things happen in the way they do. Science teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way science will affect their future on a personal, national, and global level.

The aims of Science teaching

To enable children to:

- ask and answer scientific questions
- plan and carry out scientific investigations (Observing over time, Classifying and sorting, Pattern seeking, Fair tests and Research) using equipment, including ICT, correctly
- know and understand the life processes of living things
- know and understand the physical processes of materials, electricity, light, sound and natural forces
- know about the nature of the solar system, including the earth
- evaluate evidence and present their conclusions clearly and accurately
- consider the uses and implications of science

Science Curriculum Planning

Science is taught in line with the National Curriculum time recommendations at Key Stage 1 and Key Stage 2.

Science is taught following the National Curriculum programme of study guidelines (September 2014). We make full use of the wonderful natural resource we have in our extensive school grounds including Creature Corner.

We carry out our curriculum planning in science in two phases (long-term and medium-term). The long-term plan maps the scientific topics studied in each term during the key stage. The science subject leader works this out in conjunction with teaching colleagues in each year group. We sometimes combine scientific study with work in other subject areas; at other times the children study science as a discrete subject.

Early Years Foundation Stage (EYFS)

We teach science in the EYFS classes as an integral part of the topic work covered during the year. We relate the scientific aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) (Understanding the world) which underpin the curriculum planning for children aged three to five. Science makes a significant contribution to the objective in the ELGs of developing a child's knowledge and understanding of the world, e.g. through investigating what floats and what sinks when placed in water.

Differentiation

We teach science to all children, whatever their ability. Science forms part of the school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of children with learning difficulties as well as challenging G & T children.

Assessment and Recording

At Key Stage 1 and Key Stage 2 we assess children's work in science by making informal judgements as we observe them during lessons. On completion of a piece of work, the teacher marks the work and comments as necessary. 'Working scientifically' target cards are stuck in front of children's science books to monitor progress in this area. This, as well as the summary judgement in relation to the National Curriculum, helps to form the assessment for each topic. The teacher records the attainment grades on a skills and knowledge assessment sheet which is kept electronically. We use these grades as the basis for assessing the progress of each child and we pass this information on to the next teacher at the end of the year. Year 2 and 6 teachers report a final grade based on teacher assessment for each child at the end of the year.

Resources

We have sufficient resources in the school to teach all the units of study. We keep some of these resources in classrooms and some in a central store. The media room contains a good supply of science topic books and we have computer software to support children's individual research. We have links with Thomas Allyn who provide us with resource boxes. Children's science learning is further enhanced by workshops provided by SETPOINT and ASTRUM.

Monitoring and Review

It is the responsibility of the Science Subject leader to monitor the standards of children's work and the quality of teaching in science. The Science Subject leader is also responsible for supporting colleagues in the teaching of science, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The Science Subject leader gives the Senior Leadership Team an annual summary report in which the strengths in the subject are evaluated and areas for further improvement are indicated. The Science Subject leader has specially allocated time for fulfilling the vital task of scrutinising planning, analysing samples of children's work and visiting classes to observe teaching in the subject.

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