



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, comparative 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. We use Collins Hub: Snap Science Scheme (2nd Edition) to support our planning.

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 teach 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 current attainment. 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 higher attaining 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. Teachers complete an assessment document in each lesson so that they are aware of the children who have not achieved the learning question and those that are working are working at a greater depth. 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 Sonar. 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 6 teachers report a final grade based on teacher assessment for each child at the end of the year.

Samples of children's work are kept and these are used to demonstrate what the expected level of achievement is in science for each age group in the school.

Resources

We have sufficient resources in the school to teach all the units of study. We keep some of these resources in a central store which is audited. The media room and class book corners contain a good supply of science topic books and children make use of computers for research purposes. In addition, the Guided Reading Scheme – Hooked on books has many science based texts which children access throughout the year. In addition, The Write Stuff planning is used to teach a number of Science based texts across the school in Literacy lessons.

Children's science learning is further enhanced by workshops provided by SETPOINT and other STEM companies in Stevenage. Teachers also plan and deliver science based trips linked to their topics.

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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