



The Keys Academy Trust

Science Policy

Date: Spring 2015

Review: Spring 2017

THE COOMBES C of E PRIMARY SCHOOL

POLICY FOR SCIENCE

Introduction

A high-quality science education provides the foundations for understanding the world 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. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Scientific knowledge and conceptual understanding

By following the revised national curriculum our pupils should develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics. The programmes of study that the school will follow describe a sequence of knowledge and concepts. The School recognises that it is vitally important that each child develops a secure understanding of each key block of knowledge and concepts in order to progress to the next stage. The School recognises that pupils should be familiar with, and use, technical terminology accurately and should also apply their mathematical knowledge to their understanding of Science. The School also recognises that pupil must be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

The nature, processes and methods of science

'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. Pupils should learn to use a variety of approaches to answer relevant scientific questions. These types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions which are generated and posed to them through collecting, analysing and presenting data

Spoken Language

The national curriculum for science reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their scientific vocabulary and articulating scientific concepts clearly and precisely. They must be assisted in making their thinking clear, both to themselves and others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Roles and responsibilities.

- The Science leader is responsible for the science curriculum and those elements of the School Development Plan that relate to Science.
- The Senior Leadership Team and the governing body are responsible for monitoring the effectiveness of the policy.
- The Science leader is responsible for maintaining the Science resources.
- The Science leader, in conjunction with the Inset leader, is responsible for ensuring that all staff have access to necessary Science training.

Planning

- The school follows the Science programmes of study: key stages 1 and 2 of the revised National Curriculum
- In the weekly planning document, teachers identify objectives for Science. These are taken from the End of Year statements.
- Whilst following the programmes of study, the order in which units are taught within a year group, is at the discretion of the teachers. Some topics can also be moved between year groups if appropriate.
- However, overall coverage is monitored by the Science leader to ensure all pupils have full access to the Science curriculum.

Teaching

- As a core subject within the National Curriculum, Science should be taught weekly. The curriculum time allocated to Science should be between 1 and 1 ½ hours per week in Key stage 1 and between 1 ½ and 2 hours per week in Key Stage 2
- The objectives for Science lessons should be taken from the programmes of study/end of year statements
- Wherever possible children should be taught science through practical, first hand investigations and experience.

- Lessons should refer where possible to real-life situations.
- Lessons should start with a question to generate discussion and/or a starter activity.
- During each topic teachers must ensure that at least one relevant scientist is studied.
- During all Science lessons the safety of both the staff and children should be the highest priority. (Please refer to the Health and Safety Policy for further guidance.)

Special Education Needs

- The School believes that all children are entitled to access the Science curriculum and aim to do this by offering tasks that match a child's needs, learning approaches and ability.

Most Able Pupils

- The school has identified pupils working above age related expectations. Within Science lessons, we aim to extend these children by giving them challenge tasks to deepen their understanding.

Assessment

- The school is using Target Tracker materials to monitor individual, group and whole class pupil progress in Science.
- At the end of each term, class teachers will be responsible for updating the assessment information on Target Tracker.
- Judgements about pupil performance are to be based on teacher assessment.
- A Science portfolio of pupils' work is in place. Once a year three pieces of work from each class (average, above average and a below average) are given to the Science leader for the portfolio. The portfolio will model standards of work for Staff at each academic year.

Monitoring

- The monitoring of Science takes place as directed by the School Development plan.
- Standards in Science across the school are monitored through lesson observation, work sampling and evaluation of medium term planning.