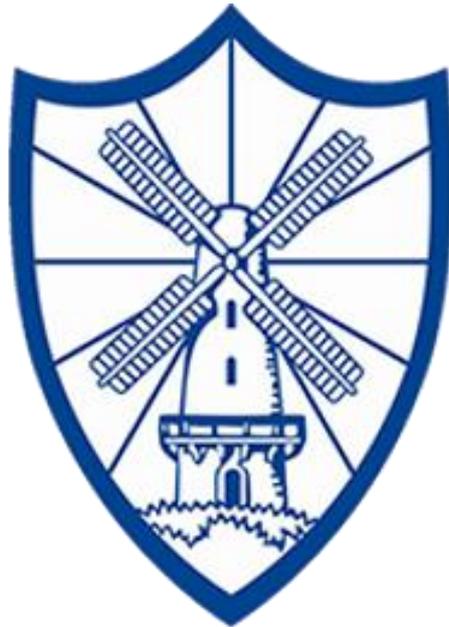




Meopham Community Academy



Enjoy, Learn, Aspire

Science Policy

This policy was reviewed by: Sue Connor, Science Subject Leaders
Date: February 2018
Approved by Governors: March 2018
Next Review Date: February 2020

Rationale

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. (**Science programmes of study: key stages 1 and 2: National curriculum in England, Sept 2013**)

Aims

- To develop pupils' **curiosity, enjoyment and interest** in science
- To develop pupils' understanding of **key scientific concepts**
- To help pupils acquire practical **scientific skills**
- To ensure pupils' understanding of the **relevance** of what they are learning
- To build pupils' **specialist vocabulary**
- To develop pupils' understanding of the **international and collaborative nature** of science

Principles of Teaching and Learning

Children should experience a wide and varied range of scientific experiences and activities that are imaginative, well planned and managed and enjoyable. These will include:

- Giving **clear demonstration, explanation and instruction** by the teacher to groups, individuals and the whole class
- Encouraging **collaborative discussion and learning**
- Providing **practical activities** to provide meaningful context and to consolidate skills
- Providing **open-ended investigational activities**
- Encouraging **independent learning, problem solving and recording**
- **Making links** between science and other subjects
- Providing **practical approaches** to science such as drama, singing and ICT

The National Curriculum

The National Curriculum for science aims to ensure that all pupils:

- Develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- Develop understanding of the **nature, processes and methods of science** through different types of science enquiries
- Are equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future

Children in Reception are taught the science elements of the Early Years Foundation Stage Document under the area of learning and development: Understanding of the World.

The Academy broadly follows the Kent Scheme of work for Science (as indicated in the Science long term plan). We have modified the scheme of work as follows:

- Generally, one unit may be taught in each term
- Some units may have been moved between years, or amalgamated, where appropriate
- Some units may be taught in collaboration with outside agencies, including neighbouring secondary schools

The content of each year group will be selected to ensure a balanced coverage of the National Curriculum programmes of study across Key Stage 1 and 2.

Time Allocation

KS1 teachers should be teaching science for a minimum of one hour each week.

KS2 teachers should be teaching science for a minimum of one and half hours per week.

Equal Opportunities and Differentiation

Science is taught within the guidelines of the school's Equal Opportunities policy. All experiences and activities will be offered on the basis of equal access regardless of gender or culture. Where appropriate, work will be adapted to meet pupils' needs and, if appropriate, extra support given. More able pupils will be given suitable challenging activities. The grouping of pupils for practical activities will take account of their strengths and weaknesses and ensure that all take an active part in the task.

Health and Safety

The safe use of equipment, materials, places and spaces is promoted at all times. The LEA has adopted the ASE book '*Be Safe*' as its model risk assessment and therefore this should be consulted when necessary. If an activity is not covered by '*Be Safe*' then we will contact CLEAPSS (Academy Science Service Helpline 01895 251496) for further advice.

All off-site activities will require the completion of a risk assessment.

Assessment

Assessment opportunities will be identified within the schemes of work. Formative assessment will be an integral part of the assessment procedure.

Children's prior knowledge, understanding and skills will be reflected within the medium term planning.

Recording based on teacher assessment will take place at the end of each topic using two strands: 1) the children's ability to work scientifically (WS); 2) the children's knowledge (K) of the topic.

At the end of the year the teacher will make an overall judgement to say where a child is working in relation to their age group. The vocabulary used will be 'emerging', 'expected' and 'exceeding'. Results will be recorded on an assessment sheet.

Role of the Science Subject Leader

- To provide professional leadership and management for science and will ensure that it is managed and organised so that it meets the aims and objectives of the Academy
- To monitor the teaching and learning within the subject through yearly book monitoring and lesson

observations

- To initiate yearly reviews of the scheme of work
- To manage the resources for science and will maintain the stock to meet the needs of the curriculum
- To support colleagues in identifying ways to enrich science learning (such as focus days, visits, visitors and competitions)
- To initiate a yearly staff skills audit to identify any areas of support and training required
- To monitor the assessment process and organise the moderating of results