ACE Learning



Science Policy

Date of Ratification	**Spring 2023**
Date for Review	**Spring 2026**

Intent

Our aim is to develop pupils' enjoyment and interest in science and develop an appreciation of its contribution to all aspects of everyday life. We want to build on pupils' curiosity and sense of awe of the natural world and to use a planned range of investigations and practical activities, to give pupils a greater understanding of the concepts and knowledge of science.

Objectives

- To introduce pupils to the language and vocabulary of science.
- To develop a knowledge and appreciation of the contribution made by famous scientists to our knowledge of the world including scientists from different cultures.
- To encourage pupils to relate their scientific studies to applications and effects within the real world.
- To develop a knowledge of the science contained within the National Curriculum through the ACE Curriculum.
- To develop pupils' basic practical skills and their ability to make accurate and appropriate measurements.
- To develop pupils' use of information and communication technology (ICT) in their science studies.
- To develop the ability to record results in an appropriate manner including the use of diagrams, graphs, tables and charts

Curriculum Progression

The knowledge and skills ladder for Science clearly outlines how learning progresses. Learning is carefully sequenced in a rolling two-year cycle to ensure the main objectives within each Key Stage are met, including the EYFS. These are delivered through the following component strands (linked to scientific enquiry):

- Questioning, enquiring and making predictions
- Planning a fair test and choosing equipment
- Observing and measuring
- Recording and reporting findings
- Concluding

Vocabulary development

Vocabulary has been deliberately structured so that each learning stage builds on previous learning. The vocabulary grids in the knowledge and skills document outlines progression between the EYFS and year six. The skills vocabulary grid outlines progression between the EYFS and year six.

Approaches to Teaching and Learning

Teachers utilise the Mantle of the Expert approach to learning where appropriate to increase pupil engagement and provide stimulation through meaningful learning scenarios. Links are made to all subject areas where possible within each theme. These links are tracked closely so that over the course of both cycles in each learning stage, children are acquiring the skills that are appropriate for their year group.

The following organisational and pedagogical strategies should also be adopted, where appropriate:

- Differentiation of tasks to meet the needs of all
- Ensuring staff and pupils are aware of the importance of working scientifically
- Using an experimental and investigative approach

- Ensuring that content provides a balanced coverage of the new curriculum.

Pupils will be involved in a variety of structured activities and in more open-ended investigative work. Wherever possible science work will be related to the real world and everyday examples will be used. We will also ensure that pupils realise the positive contribution of both men and women to science and the contribution from those of other cultures. Curriculum planning will ensure that all pupils have an equal opportunity to take part in accessing the National Curriculum objectives and its associated practical activities.

Resources

In order to encourage an investigative approach to learning, science resource boxes will contain sufficient basic equipment to allow simple investigations, observations and measurements to be carried out in small groups. The science team will see that this level of resourcing is maintained and will administer the allocated budget for science. Science resources are held in a central location in school. Use of the outdoor area is also promoted to provide further opportunities for observational and investigative activities.

Health and Safety

In line with the school's Health and Safety Policy, children are instructed in the safe use of equipment and resources. Teachers will identify any Health and Safety issues on their planning and are encouraged to seek further advice when necessary.

Assessment

At least once a year, summative assessments will be made; teachers will report on how well children are working against their year group's objectives for Science.

Monitoring Impact

Monitoring of teaching and learning is a process that is essential to gauge quality of teaching to ascertain progress children/groups are making and to identify areas for improvement for individual teachers, year groups, key stages or specific subjects. It is also an opportunity to celebrate the strengths and successes of teachers and their pupils.

Pupils: The Science leader will monitor a sample of work at set points throughout the year. For example, by looking at evidence in books, classrooms and via pupil voice during lesson observation. Teacher judgements will also be analysed.

Staff: Clear verbal and written feedback will be provided to teaching staff that are observed and targets set accordingly to identify next steps in their continuing professional development.

The implementation and impact of Science will be recorded by the subject leader and reviewed regularly.