SCIENCE POLICY

Reviewed: October 2025

Next Review: October 2027

1. INTRODUCTION

1.1 Science is a core subject of the National Curriculum. This policy outlines the purpose, nature and management of the science taught in our school.

1.2 The school policy for science reflects the consensus of opinion of all the staff. It has been drawn up as a result of staff discussion and has the agreement of the Governing body.

1.3 The implementation of this policy is the responsibility of the Headteacher, subject leader and all the teaching staff.

2. NATURE

2.1 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. (National Curriculum 2014)

2.2 Scientific enquiry skills will be developed through teaching in all areas of science. Through practical experiments and investigations, the children will learn to work as scientists.

3. INTENT

Our Science curriculum intends to foster children's natural curiosity to develop their knowledge and understanding of the world, recognising the importance of Science in every aspect of everyday life. We ensure that children have the opportunity to develop the skills associated with scientific enquiry including the opportunity to evaluate evidence. We endeavor for the children to take this curiosity beyond school, into their wider environment, to develop a lifelong love and respect for science.

4. ENTITLEMENT

4.1 The knowledge and skills to be taught in each year group is set out in the programs of study for Key Stages 1 and 2.

4.2 In Key Stage One, the children will learn about:

- Plants
- Animals including humans
- Everyday materials
- Seasonal change
- Living things in their habitats

4.3 In Key Stage Two, the children will learn about:

- Plants
- Animals including humans
- Rocks

- Light
- Forces and Magnets
- States of matter
- Sound
- Electricity
- Properties and changes in materials
- Earth and Space
- Evolution and inheritance
- Living things in their habitats

4.4 The children should be taught to work scientifically in all year groups. This is not a separate strand and should be embedded within the teaching in all areas. The methods and processes to be taught in each year group are set out in the programs of study.
Children should be taught to use the following types of enquiry:

- Observing over time
- pattern seeking
- identifying, classifying and grouping
- comparative and fair testing (controlled investigations)
- and researching using secondary sources.

4.5 In the EYFS, the focus for the children's learning will relate to the early learning goals for Understanding the World. The children will develop knowledge and understanding of their environment, people and features of the natural and man-made world.

5. IMPLEMENTATION

5.1 The school has a statutory responsibility to cover all the programmes of study for Key Stages 1 & 2.

5.2 We follow the White Rose Science scheme of work to ensure full coverage of the National Curriculum. This is organised on a two year rolling cycle for Year 1 and 2, Years 3 and 4 and Years 5 and 6. This ensures that over the two years, the children receive their full entitlement without any repetition.

The White Rose Scheme breaks learning into blocks. These blocks are progressive and build knowledge over time. Our Long Term Plans take account of this when setting out the two-year cycle.

Each block breaks the learning down into small steps. Each small step has an overview document which provides key learning points, knowledge, vocabulary to be taught, possible misconceptions, key questions and practical ideas.

5.3 Each step has accompanying resources to support teaching; however, we believe that science should be taught practically where possible and make full use of the practical ideas in the scheme.

5.4 The working scientifically requirements are embedded in all teaching of science and build progressively.

5.5 Children will undertake the five different enquiry types during their science lessons. These are:

- Research using secondary sources.
- Comparative and fair testing.
- Observing over time.
- Pattern seeking.
- Identifying, classifying and grouping.

There will be one enquiry per block to allow time to explore the enquiry fully. This involves planning, investigating and evaluating.

Each lesson will begin with a retrieval activity to revisit prior learning and allow teachers to identify misconceptions and any areas that require revisiting.

5.6 All teachers will be responsible for the planning and teaching of science and can refer to the science coordinator for support.

5.7 Activities are planned in such a way as to encourage full and active participation by all children irrespective of prior attainment. Lessons will include the chance to work alone, in pairs, groups and as a whole class. Children will be given the chance to develop inter personal and social skills via scientific study.

5.9 Wherever applicable, children will use technology to support their work in science, using videos, recording data, researching using the internet and logging data over time.

5.10 The teaching of science will be organised to encourage the use and application of maths and English skills. Within the foundation subjects opportunities to apply scientific explanations, processes and working methods will be implemented.

5.13 All children will be made aware of the relevance of health and safety when undertaking work in science. Children will be introduced to risk and will learn how to deal with it, so as to work safely. Specific guidance will be given for the use of equipment.

5.14 Science in the school shall be both respected and celebrated. The school will recognize and celebrate children who work hard in science. Teachers will encourage and praise independent study away from school and share these with class/school.

5.15 Whenever possible, the opportunity to visit/ have visitors for the benefit of science will be sought.

5.16 All staff to promote STEM within the school through assemblies, trips, visitors, competitions, celebrations and events. To make children aware of the importance of STEM within the world and the pathways that lead from it.

6. SEN

6.1 At Tedder School, we believe that all children are entitled to a broad and balanced curriculum. Differentiation for children with special needs will be possible in the presentation of work and in the form of recording. Working in mixed ability groups, especially in investigative work, can be particularly beneficial. Support may be given by a Learning Support Assistant and IEP targets will be addressed where relevant.

6.2 All efforts will be made to ensure that all children get to experience science. Teachers will work with parents and SENCO to develop practice that will allow this to happen.

7. ASSESSMENT, RECORDING AND MONITORING

7.1 By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant program of study.

7.2 Teachers make ongoing use of formative assessment to identify successes and set next steps for learning.

7.3 Assessments are based on quizzes, observation, discussion and learning in the children's books. Assessments are made over a period of time and based on a range of activities.

At the end of each block, children complete a short end of unit test. This supports teacher assessments. Assessments are recorded on a spreadsheet which is stored centrally.

7.6 Monitoring of the standards of the children's work and of the quality of teaching in Science is the responsibility of the Science subject leader. The work of the subject leader also involves supporting colleagues in the teaching of Science, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The subject leader gives the Headteacher an annual summary report in which s/he evaluates the strengths and weaknesses in the subject, and indicates areas for further improvement. The leader has specially-allocated regular management time. Monitoring activities include: looking at planning; work scrutiny; pupil voice activities; and lesson observations (where possible). The named governor responsible for Science meets regularly with the subject leader in order to review progress.

8. RESOURCES

8.1 Where possible these should be drawn from those everyday items familiar to the children. Items used should be if possible reusable or recycled. All measures should be in place to reduce waste and lessen the environmental impact. When there is a conflict with any resource (allergy, cultural or physical) alternatives will be sourced to allow full participation.

8.2 Most specialist equipment is stored in labelled boxes in the main store cupboard, with extra equipment in classrooms. Teachers are responsible for the return of resources.

8.3 The school library has a supply of children's reference.

8.5 Science leader will collate a staff knowledge record. From this it can be seen who has strengths in certain areas of science and will allow peers to seek help from those who are best equipped to give it. This will allow smoother transition of teaching staff between year groups.

8.6 Where ever possible, Teachers will make full use of the school grounds and the natural environment in order to teach and develop the children's understanding.

REVIEW