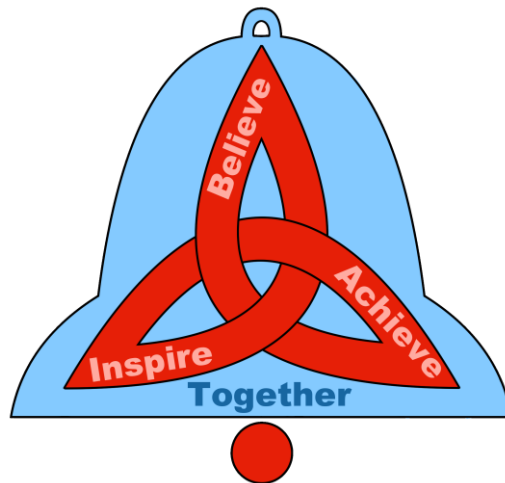


Weston Turville CE School



SCIENCE POLICY

Co-ordinator	Mrs E Hoodless
Policy produced by	Mrs E Hoodless
Policy reviewed by	Mrs E Hoodless
Reviewed policy agreed	Spring 2022
Adopted by Staff	Spring 2022
Adopted by Governors	Spring 2022
Next Review Date	Spring 2025

INTENT

Our vision at Weston Turville CE School is to give children a Science Curriculum which enables them to explore and discover scientific phenomena in the world around them confidently and independently. In order to achieve this, we offer our children engaging, practical and purposeful experiences, that encourage curiosity, with opportunities to ask and answer questions, take risks, experiment, reflect, and learn from their mistakes. Young children are naturally curious and passionate about learning; we provide a stimulating science curriculum that nurtures children's natural curiosity and their on-going intellectual development. Through a hands-on, enquiry-based curriculum, children will experience the joy of having wonderful ideas, exploration and investigation, the joy of finding out. Our aim is that these stimulating and challenging experiences help children secure and extend their scientific knowledge and vocabulary. We believe that these opportunities will ensure that our children are confident, life-long learners who will explore the world around them with curiosity, excitement and wonder.

Our children will -

- 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 scientific enquiries that help them to answer scientific questions about the world around them;
- achieve the best possible standards whatever their starting point;
- access a rich and broad science curriculum that allows high levels of personalisation;
- access a curriculum that connects and builds on prior knowledge leading to progression and depth.
- become equipped with the scientific knowledge required to understand the uses and implications of Science, today and in the future.
- develop a variety of ways to communicate information and regard science as an exciting and valuable part of the curriculum.

IMPLEMENTATION

- The schools Medium term planning and coverage of key scientific skills will be used by teachers to plan, this will drive the journey of Science for every year group, building on from prior learning and develop progressively key skills and depth.
- Provide opportunities for children to develop the skills associated with science education as well as develop a greater knowledge and understanding of life processes and living things, materials and their properties and physical processes as described in the National Curriculum for science.
- Promoting enjoyment and enthusiasm for learning through real, first hand and rich science experiences so that all children explore, question, predict, plan, carry out and make observations and conclusions about their scientific tests.

- Allowing children to discuss and present their work using scientific language, observations, diagrams, jottings and charts
- To foster positive attitudes such as curiosity, perseverance, willingness to use and appraise evidence, willingness to tolerate uncertainty, critical reflection and enthusiasm.
- Developing an understanding of the importance of Science in everyday life.

Planning the School Science Curriculum

The programmes of study for science are set out year-by-year for Key Stages 1 and 2. Teachers will base their planning on the programmes of study for their relevant year groups.

The Programmes of study describe a sequence of knowledge and concepts. While it is important that pupils make progress, it is vital that they develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage.

Pupils should be able to describe associated processes and key characteristics in common language. They should use technical terminology accurately and precisely and build up an extended specialist vocabulary.

The science curriculum reflects the importance of spoken language in pupils' development. 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 should also apply their mathematical knowledge to their understanding of Science, including collecting, presenting and analysing data.

Organisation of Science Lessons

Organisation of science lessons will vary according to the age and topic that children are undertaking. Some topics lend themselves to more practical and investigative activities, whilst others may require a teacher based demonstration or factual based discussion or exercise. All lessons start with a Thinking, Talking, Doing science activity which will be documented in the class ttd books.

Investigative work requires pupils to work on their own initiative and children will be actively encouraged to make their own decisions. Classroom equipment (where possible and appropriate) will be organised in such a way to facilitate investigative work. Pupils will become increasingly responsible for collecting, using and returning equipment to the correct place.

Early Years Foundation Stage

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. The most relevant statements for science are taken from the following areas of learning:

Communication and Language, Physical Development, Understanding the World.
Throughout their main topics they will carry out activities which allow them to:

- find out about and identify some features of living things, objects and events they observe
- ask questions about why things happen and how things work
- investigate objects and materials using all senses as appropriate
- observe and find out about their environment

Key Stage One

During Key Stage One pupils;

- observe, explore and ask questions about living things, materials and the world around them.
- begin to work together to collect evidence to help them answer questions, find patterns, classify and group objects, research using a variety of sources and carry out fair testing.
- Share ideas and communicate using scientific language
- Use simple diagrams, charts and tables

Key Stage Two

Children are encouraged to:

- Extend the scientific questions they ask and answer
- Carry out a range of scientific enquiries including observations over time, pattern seeking, classifying, grouping and researching
- Plan investigations changing one variable to make a fair test.

Recording

Evidence and recording of work will vary throughout the school. As the children's skills progress they will be expected to record and analyse findings in more detailed ways. They should be encouraged to present work tidily, label diagrams etc as laid out in the Feedback Policy. Each child will have a book for recording science activities and each Class has a Thinking, Talking, Doing Science floor book.

Assessment

Children will complete knowledge organiser quizzes at the beginning of a topic to ascertain prior knowledge and at the end to see improvement. Assessment will be made against the learning objectives of the 2014 National Curriculum and linked to

age related expectations for each year group. Teachers will complete planned assessment focussed tasks each half term. Assessment will be in line with the school's assessment policy and this policy should be read in conjunction with this. Progress will be measured using the scientific enquiry statements through different key stages. Knowledge Organisers for science will allow teachers to assess the children's knowledge at the start and end of a unit. They also show the key areas that the children will study.

Resources

The majority of science resources are kept in the resource area in The Hub. Resources are labelled to ease access and staff are asked to return resources as soon as possible after use. Teachers requiring additional resources/consumables should inform the science coordinator in ample time so they can be ordered, particularly in the case of consumables such as batteries.

Equal Opportunities, Multicultural Issues and SEND

The school aims to ensure that everyone achieves equal access; discrimination on the basis of colour, culture, origin, sex or ability is unacceptable. Learning approaches are planned with this in mind.

SEND

Children are given access to science irrespective of ability, race and gender (see Equal Opportunities Policy). Teachers are responsible for the learning of all children in the class. This may involve formulating individual learning programmes for any children with particular needs. Activities in science have characteristics which help pupils to achieve success.

- They emphasise first-hand experience;
- Knowledge and skills can be developed in small steps through practical activities;
- Science investigations can capture the imagination and so encourage participation and enthusiasm.

Provision for pupils with Special Educational Needs and Disabilities is planned in line with the Code of Practice for SEN. Tasks are differentiated and matched according to the abilities of the pupils. Additional challenge for high achieving children is provided by the class teacher. We aim to give very able pupils the opportunity to extend their scientific thinking through extension activities such as problem solving, investigative work and research of a scientific nature.

Monitoring

Science will be monitored by the co-ordinator through lesson observation, learning walks, book scrutinies and planning scrutinies.

Governors will monitor Science through termly meetings with the science coordinator, annual results data, observation of lessons and study of the School Development Plan.

Health & Safety

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class Teachers, Teaching Assistants and the Subject Leader will check equipment regularly and report any damage, taking defective equipment out of action. Teachers will ensure the School Policy for Health and Safety is integrated into Science teaching

IMPACT

At Weston Turville CE School, through our rich and broad curriculum, we are enabling children to gain the knowledge, skills and understanding they need for their future. Each of our children is individual and unique and each has a potential that we need to unlock. Our school motto is 'Inspire, Believe, Achieve Together' and through our curriculum we enable this to happen. The majority of children will leave school achieving at least Age Related Expectations. The rich and broad curriculum and units of work will enable teachers to consistently plan lessons progressively building on prior knowledge and the development of key skills in order to deliver lessons over the highest standard and children's outcomes to be of the highest quality. Children will be confident, resilient, self-motivated, independent learners, with a thirst for challenge and depth of understanding of scientific skills and concepts.