St Leonard's CE Primary School
Science Policy

Approved by:	**QofE Committee**
Date:	**November 2024**
Next review due by:	**October 2029**

Policy Statement

Science is used to Engage, Challenge and Inspire our children and to develop knowledge and understanding of the world in which they live. Children achieve this through practical first hand experiences and secondary sources. Experiences allow them to ask questions, plan and predict, set up fair tests, observe, investigate, interpret, record, communicate and evaluate their findings.

Purpose and Intent

The purpose of this policy is to clarify and inform staff, parents, governors, visitors and pupils how Science is taught at our school.

All pupils at St Leonard's School are taught key knowledge and skills in the scientific subjects, that allow them to develop an understanding of the world around them at an age-appropriate level and in line with the National Curriculum.

Our intention is to inspire children's natural excitement and curiosity and encourage them to pursue scientific enquiry. Throughout EYFS, KS1 and KS2, children should learn to explain and analyse, make predictions and solve problems.

Teachers aim to nurture a love for the natural world, excitement for future possibilities in science and provide many opportunities for pupils to respond creatively in their learning, whilst at the same time broadening their educational horizons and expectations.

We want to inspire young scientists of the future!

Through the teaching of Science at school, our intention is that all 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 enquiry that help them to answer scientific questions about the world around them
- be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Guidelines: the approach to teaching and learning in Science

As a school we follow the National Curriculum 2014 and Development Matters for EYFS. The implementation of the curriculum is broken down into themes and topics for each phase. Teachers have access to various schemes of work and resources and use these when planning high quality learning experiences for the children.

During the Foundation Stage, Science is mainly experienced through the area of learning called 'Understanding the World'.

From Key Stage 1 and 2, science is taught through different topics for each department, on a two-year rolling programme, outlined by the Science programmes of study: key stages 1 and 2, 2014. Many of these topics are revisited and built upon at regular intervals throughout the primary years (see St Leonard's Long Term Plans for further details).

The Department for Education (DfE) has stated that "It is for schools to decide how much time to spend teaching each subject, taking into account the needs and particular circumstances for their pupils." [Primary Curriculum: subject teaching time, 7th September 2015, The Key for school leaders, online publication]. Therefore, at

At St Leonard's we allow teachers the flexibility to amend the teaching hours as needed, either teaching Science weekly or blocking the subject, provided the statutory requirements in the National Curriculum 2014 are met.

Science lessons at St Leonard's

Teachers in KS1 and KS2 will use the same format for all science lessons.

We use 'Bright ideas time' in every lesson to encourage every child to develop confidence in talking about the scientific opinions.

Sticky knowledge will be used to re-visit key concepts and learning from both previous lessons and previous units of work.

Each week, key vocabulary will be discussed.

Working Scientifically

'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group and is embedded throughout the science curriculum. Pupils learn to use a variety of enquiry approaches to answer relevant scientific questions. These types of scientific enquiry include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); researching using secondary sources.

Children will develop enquiry skills: asking questions; making predictions; setting up fair tests; observing and measuring; recording data; interpreting and communicating results and evaluating.

Progression and Differentiation

The whole school plans ensure the continuity and progression of scientific knowledge and skills; differentiation is incorporated into short term plans to enable all learners to access the material taught and to provide suitable challenge for the most able pupils.

Special Needs

All our planning takes account of children's individual needs whether it is through provision of resources, support, outcome, activities, recording or discussion.

Equal Opportunities

We aim to ensure that all children regardless of race, gender, physical ability or special needs have access to the science curriculum. This may mean that extra class support or resources are required to aid the development of scientific learning e.g. the use of EAL support, pre-learning of vocabulary and availability of TA support.

Computing

Whenever practical and relevant we aim to use computing as a teaching and learning tool in science work. Children research, communicate, collect and investigate data in a variety of ways using a wide range of programmes.

All classrooms are equipped with software and access to the internet which can be used individually or in conjunction with the whiteboards, Chromebooks or iPads to support learning. The ability to embed computing in science has been greatly assisted through their use.

Records and Assessments

Children are assessed throughout units of work so that inputs can be modified according to need. They are also assessed at the end of each unit to show if they have met age-related expectations.

Working scientifically skills are assessed by teachers at the end of terms 2, 4 and 6. Summative assessment is passed on to the next teacher at the end of each year.

Safety

Children are taught how to handle materials and equipment safely when undertaking science experiments and investigations.

Teachers are required to consider the risk associated with any activity and complete standard risk assessment documents, where appropriate.

Oxfordshire County Council Health & Safety support provide our school with membership to the CLEAPSS website [http://primary.cleapss.org.uk/Resources/Doing-Things-Safely/]. Staff are able to log in and check up-to-date safety advice and risk assessments online.

Leadership and Management Roles

The role of the Science Leader is to:

- Monitor the Science curriculum
- Give pedagogical support to colleagues where appropriate
- Develop and update the Science Policy
- Take responsibility and purchase all departmental resources for Science
- Keep up to date with development in Science through attending relevant INSET
- Organise Science events within the school

Monitoring and Evaluating the Subject

The impact of the Science curriculum is monitored by the Science Leader through the collection of medium term plans, observing lessons, collecting and monitoring children's work, science displays and analysing assessments in liaison with the SLT.

Equipment and Resources

The school continues to build up its bank of resources through departmental budgets. These are stored in one place to ensure availability to all.