

# St Alban's CE Primary School



## Science policy

November 2025

Review date: November 2025  
Renewal date: November 2026

Faith Hope Love

# Our school vision



Our vision is that all our pupils should grow in:

**Faith** in God, or be inspired by faith, and in their own ability to fulfil their potential,

**Hope** to be the best of examples, to work to change themselves and the world for the better, and

**Love**, reflecting God's love in unselfish love for others.

Our vision is based on the God given virtues of:

## FAITH, HOPE AND LOVE

1 Corinthians 13:13

Faith

Hope

Love

## **Intent**

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 that help them to answer scientific questions about the world around them
- Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

At St. Alban's CE Primary School we aim to provide a Science curriculum which enables all children to show curiosity about, explore and discover both the world around them and the wider world.

Developing confidence in an investigative, working scientifically, 'hands-on', practical, visual approach, with opportunities to develop language and vocabulary through discussion of ideas, knowledge and findings.

Recording ideas and findings in a variety of ways, children will make links in their science learning with the wider school curriculum, and will utilise skills from other curriculum areas.

## **Scientific knowledge and conceptual understanding**

The programmes of study describe a sequence of knowledge and concepts. While it is important that pupils make progress, it is also important that they develop secure understanding of each unit of knowledge and concepts in order to progress to the next stage. Children's starting points are identified by assessing prior learning at the beginning of each science topic. Common misconceptions are addressed throughout the topic. At the end of the unit, children's knowledge is assessed in line with the key knowledge identified prior to the teaching unit. Pupils should be able to describe associated processes and key characteristics in common language, but they should also be familiar with, and use, technical terminology accurately and precisely. The science curriculum requires children to apply mathematical knowledge including collecting, presenting and analysing data.

## **The nature, processes and methods of science**

'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. This is embedded within lessons, not taught as a separate strand. Pupils learn to use a variety of approaches to answer relevant scientific questions, including:

- Observing over time
- Pattern seeking
- Identifying, classifying and grouping

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- Comparative and fair testing (controlled investigations)
- Researching using secondary sources.

Pupils are given opportunity to seek answers to questions through the skills of observing, raising questions, predicting, hypothesising, planning, controlling factors (fair testing) measuring, collecting interpreting data, constructing tables and graphs, explaining, communicating and evaluating findings, researching information.

### **Spoken language**

The national curriculum for science reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. 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. Adults assist children in making their thinking clear, both to themselves and others. Staff help children to build secure foundations by using discussion to probe and remedy children's misconceptions.

### **EYFS (Foundation stage)**

The Foundation Stage deliver science content through the 'Understanding of the World' strand of the EYFS curriculum. This includes guiding children to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the environment. They are assessed according to the 'Development Matters' attainment targets.

### **Key Stage 1**

The principle focus of science teaching in Key Stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. They are encouraged to be curious and ask questions about what they notice. They are helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information.

Children will begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about science should be done through the use of first-hand practical experiences, there will also be some use of appropriate secondary sources, such as books, photographs and videos.

'working scientifically' is described separately in the programme of study, but must always be taught through and clearly related to the teaching of substantive science content in the programme of study.

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Pupils should read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at Key Stage 1.

## **Lower Key Stage 2**

The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them. They do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

'Working scientifically' is described separately at the beginning of the programme of study, but must always be taught through, and clearly related to, substantive science content in the programme of study. Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge.

## **Upper Key Stage 2**

The principal focus of science teaching in upper key stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At upper key stage 2, they encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They also begin to recognise that scientific ideas change and develop over time. They should select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

'Working and thinking scientifically' is described separately at the beginning of the programme of study, but must always be taught through and clearly related to substantive science content in the programme of study.

Pupils should read, spell and pronounce scientific vocabulary correctly.

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## **Resources**

The science resources are kept mostly in the large science cupboards in the corridor and the room below the library. EYFS have a range of resources kept in classrooms for simple access for children during exploration. The school library has a good supply of science topic books to support children's individual research. The ICT suites and the laptops can also be used for research purposes. The Kapow SOW is used to support teachers in delivering the national curriculum outcomes.

'Consumable' resources – teachers to advise the Science Lead of resources required.

## **Equal opportunities**

At St. Alban's CE Primary School we are committed to providing all children with an equal entitlement to scientific activities and opportunities regardless of race, gender, culture or class.

## **Inclusion**

In school we aim to meet the needs of all our children by differentiation in our science teaching by providing a variety of approaches and tasks appropriate to ability levels, including small mixed ability groups and 1:1 support. This involves providing opportunities for SEND pupils to receive support to develop speech and language skills, as well as scientific skills and knowledge. This will enable children with learning and/or physical difficulties to take an active part in scientific learning and practical activities and investigations and to achieve the targets they have been set. Some children will require closer supervision and more adult support to allow them to progress whilst more able children will be extended through differentiated activities. By being given enhancing and enriching activities, more able children will be able to progress to a higher level of knowledge and understanding, appropriate to their abilities.

## **Assessment**

Assessment of children's learning is made through a combination of informal assessment of prior learning, on-going teacher assessment, end of unit assessments, formal tasks and tests where appropriate. Records of children's achievements in science are recorded by teachers on the school tracking system, formative and summative, half termly.

Progress and achievement in science is reported to parents through end of year reports and parents' meetings.

The Science Lead carries out the assessment of the impact on children's learning over time through staff meetings, children's work and pupil voice, and analysis of target tracker data.

## **Safety**

It is important that children are taught the rules of safety when undertaking experiments and investigations. Materials and equipment need to be handled sensibly. The teacher needs to ensure that all staff and pupils involved are aware of safety implications connected with any science activity they are undertaking.

## **The role of the Science Lead**

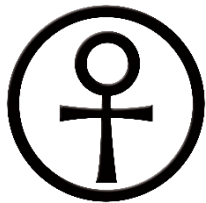
The Science Lead monitors the standards of children's work. The Science Lead also supports colleagues in their teaching, keeps informed about current developments in the subject, and provides a strategic lead and direction for science in school. The Science Lead monitors the budget, resources, and science topics. The Science Lead has specially-allocated time for fulfilling the task of reviewing samples of children's work, training, liaising with other subject leaders from other schools and organising science week.

## **Parents**

We aim to encourage parental input by initiating an annual family challenge event that engages families in scientific discovery. This is currently the winter home learning challenge.

Children may receive science homework based on their current topic.

## Appendix 1



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### **Curriculum Statement for Science**

#### Intent

To be given the opportunities to explore, observe and ask big questions leading to awe and wonder of science and its concepts. Learning is meaningful and purposeful with as many familiar links to everyday life as possible. Children are given memorable experiences through relevant, hands on learning and meaning trips and visitors. Science should always be given a context. Children at St Albans are curious learners and we use Science to facilitate and celebrate this allowing children to ask questions and investigate areas of interest themselves.

#### Implementation

Our teaching of Science at St Albans plays a great importance to “Working Scientifically”. This means that children are given as many opportunities to conduct or observe experiments as possible. Children are taught using rich scientific vocabulary. This allows for clear progression throughout year groups. Writing skills are crucial in Science at St Albans. Children are taught to record their own experiments. KS1 experiments focus on predictions and observations and in KS2, experiments progress to look at variables and how to create a fair test. Teachers plan investigations by thinking about a relatable and clear situation. This allows pupils to see the importance of science in everyday life! Teachers plan exciting trips and visitors to create engagement and enthusiasm at St Albans.

#### Impact

Our main aim for Science at St Albans, is to foster and celebrate the curiosity that our children have and encourage them to continue celebrating that every day, not just at school but in their future aspirations. We follow the National Curriculum, however we encourage children to apply their learning to different contexts; gaining strong knowledge about their scientific subjects as well as creating interest and enjoyment. We aim for pupils to understand science and its core concepts and be able to relate this to themselves and the world around them.

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