



## Alban Wood Primary School –

### **Rationale**

At Alban Wood Primary School we believe that Science is a body of knowledge built up through experimental testing of ideas. Science is also methodology; a practical way of finding reliable answers to questions we may ask about the world around us. Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills. We believe that the teaching of Science helps children develop an interest and curiosity about the world in which they live, and fosters a respect for the environment and the creatures in it. We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability.

### **Science Policy**

#### **Our aims in teaching science include the following:**

- Preparing our children for life in an increasingly scientific and technological world.
- Fostering concern about, and active care for, our environment.
- Helping our children acquire a growing understanding of scientific ideas.
- Helping develop and extend our children's scientific concept of their world.
- Developing our children's understanding of the international and collaborative nature of science.

#### **Attitudes**

- Encouraging the development of positive attitudes to science.
- Building on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and responsibility.
- Building our children's self-confidence to enable them to work independently.
- Developing our children's social skills to work cooperatively with others.
- Providing our children with an enjoyable experience of science, so that they will develop a deep and lasting interest and may be motivated to study science further.

## Skills

- Giving our children an understanding of scientific processes.
- Helping our children to acquire practical scientific skills.
- Developing the skills of investigation - including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Developing the use of scientific language, recording and techniques.
- Developing the use of computing and technology in investigating and recording.
- Enabling our children to become effective communicators of scientific ideas, facts and data.
- Applying Literacy and Maths skills during Science lessons.

## Teaching Aims:

- The principal 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 should be encouraged to ask questions about what they notice.
- 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 should 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.
- 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 should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. They should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates.

## We aim to do this by:

- teaching the statutory subject requirements (as set in the National Curriculum 2013), in ways that are imaginative, practical, purposeful, well managed and enjoyable.
- giving clear and accurate teacher explanations and use skilful questioning to develop children's understanding.
- making purposeful links between science and other subjects.

Our role is to balance the teaching of new facts with the opportunity to apply scientific skills across several components of scientific study, which include:

- **Ideas and Questions**
- **Planning** (Planning an Approach, Equipment & Variables)
- **Obtaining and Presenting Evidence** (Observing&Measuring, Secondary Sources, Recording Information &Data, Presenting Evidence)
- **Considering and Evaluating Evidence** (Looking for Patterns, Explaining Results, Communication, Evaluating)

## Structure

Using the New National Curriculum (2013), a whole school provision map has been agreed, ensuring good progression and coverage of topics through and across Key Stages and year groups. Opportunities for practical application is carefully planned and ensures that all 4 enquiry methods (fair testing, classifying, surveying, measuring and observing) are covered over a year.

Children in the Foundation Stage are taught the science elements outlined in the EYFSP through Understanding the world (ELG 13-15).

It is also expected that teachers plan and adapt units to suit their cohort's interests, current events or resources available, while maintaining the statutory requirements for the subject.

KS1/FS teachers should teach science for a minimum of 1 hour a week, with elements of scientific learning being presented as part of CIL as well.

KS2 teachers should be teaching science for a minimum of 2 hours per week.

We also plan a whole school focus week once a year, usually with an over arching theme, which aims to increase the profile of science at school.

We also run a science club in the summer term, using the firm MAD Science, which is always extremely popular.

## Resources

We have a central resource area with well labelled drawers, which is accessible to all staff. In addition, some classes have year group topic specific resources which are stored in their own areas. There are also various teacher resource books and packs which can be used to enhance the quality of lessons.

## Displays

Each classroom has a dedicated science display board which is regularly updated to reflect the current learning topic. Appropriate scientific vocabulary and open questions are key elements in all displays .

## Assessment and Recording

Teachers assess the children's work in science both by making informal judgements through observation, discussion and the use of high level questioning, and by doing formal assessments of their work, measured against the specific learning objectives set out in the National Curriculum. We have clear expectations of what pupils will know, understand and be able to do at the end of each topic (and year).

Teachers currently use the HfL Assessment Criteria for Science ('Working Scientifically') grids to assess children across the 4 Assessment Foci each term, reporting levels to the SLT, and the Core Subject Team scrutinise these annually to ensure that judgements are consistent and accurate across the school.

## Health and Safety

All staff are responsible for ensuring that children are taught how to behave responsibly when using scientific equipment and resources.

Drug education is also included in several topics throughout the school.