



# St Hilary's School

## Science Policy

We actively promote democracy, the rule of the law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs. These are fundamental British Values which underpin all that we offer, as does our School Motto 'Not for oneself but for all.'

### Rationale

Science is fun! It can be defined as "*the concerted human effort to understand, or to understand better, the history of the natural world and how the natural world works, with observable physical evidence as the basis of that understanding. It is done through observation of natural phenomena, and/or through experimentation that tries to simulate natural processes under controlled conditions*".

Science in school relies on pupils having access to first hand experiences and other sources of information. Scientific investigations and problem solving activities will be used to develop pupils' understanding of fundamental concepts. The main aspects of Science to be studied will be determined by the ISEB syllabus.

### Aims

OUR AIMS IN TEACHING SCIENCE are that all children will:

- develop their natural sense of awe and wonder about the world around them
- become independent thinkers, asking questions and thinking about how they can find out the answers
- build up a practical approach to problem solving which has applicability in everyday life
- be competent at handling scientific equipment and choosing appropriate equipment for each investigation
- develop a set of attitudes which will promote scientific ways of thinking, including open-mindedness, perseverance, objectivity and the recognition of the importance of teamwork
- come to understand the nature of "scientific method" involving: observation, the making and testing of hypotheses, the design of fair and controlled experiments, the drawing of meaningful conclusions through critical reasoning and the evaluation of evidence
- become effective communicators of scientific ideas, facts and data
- begin to build up a body of scientific knowledge and understanding which will serve as a foundation for future enquiry.

### Strategies for teaching

In Pre-Prep, Science is integrated into topics. The children are taught in mixed ability classes by their class teachers (with a teaching assistant to support group activities in Reception - Year 2). In Year 3 - 6, Science is taught by a specialist teacher in mixed ability classes. All classes in Prep have 2 hours of Science each week.

- Year 3 & 4 children do 30 min homework each week
- Year 5 & 6 children do 45 min homework each week

## **Learning Outcomes**

- Pupils will develop their skills, knowledge and understanding of Science through focused exploration and investigations. This includes work in the laboratory and in the wider school grounds. Work at school will be supplemented with meaningful trips (including residential work) and workshops.
- Pupils will be enthused by Science!
- Pupils will be able to ask questions, use scientific vocabulary to describe and explain the behaviour of living things, materials and processes. They will be able to use a range of recording methods, e.g. diagrams, drawings, graphs, tables and charts.
- Pupils will develop their awareness of the relevance of Science to their personal health and to their local environment, and of the need to care for their environment. They will be able to explain familiar phenomena in terms of their understanding of Science.
- Pupils will be able to obtain evidence to test ideas in a range of contexts. They will develop an understanding of health and safety and be taught to recognise hazards and assess the risks to themselves and others and how to control these risks.

## **Assessing, Recording and Reporting**

- Children are assessed at the end of each topic and, through PTS end of year assessments in May, to check their understanding and to allow teachers to evaluate and develop their teaching and planning.
- Pupils' progress is tracked as they progress through the school so that their scientific development can be monitored.
- Progress is reported to parents twice a year in formal report format, with an additional short report being sent to those in Year 6 at the end of the first half term.

## **Use of resources**

- The laboratory is used by all Prep classes. Prep-Prep teachers are welcome to use the laboratory should they wish, when it is not being used by Prep. They are also able to borrow suitable equipment which is not part of their classroom resources, e.g. skeleton, electrical circuit kits and bug pots.
- Use of ICT is encouraged throughout the school for science purposes. There are a set of iPads which can be used by pupils during science lessons for research. Data loggers, heart monitors and iPad apps are used during specific topics. DVD clips are used regularly to enhance learning.

**Reviewed: June 2019, July 2020**

**Next Review: June 2021**

**Person Responsible: Mrs Hannah Longbottom (Head of Science)**