

## **Rationale**

Our vision is to provide a science curriculum which allows pupils to explore and have a deeper understanding of the natural and made worlds, by providing experiences which encourage curiosity and promote learning. Through the teaching of science, we hope to foster a growth mind-set approach, where children will experience the joy of learning 'how' and 'why', whilst gaining valuable skills, such as gathering and making sense of evidence and generating and testing ideas, as well as the skills required to become independent learners. We aim to encourage pupils to be confident, to ask questions and not to be afraid of getting it wrong; instead viewing it as an opportunity to deepen their understanding.

## **Aims**

- To promote positive attitudes to the learning of science, developing the pupil's enthusiasm for, and commitment to science.
- To develop the pupil's scientific knowledge and understanding.
- To develop the pupils understanding of the nature, processes and methods of science through a variety of teaching and learning styles and different types of science enquiry that helps them to answer scientific questions about the world around them.
- To develop the children's investigational skills through relevant practical tasks.

## **Objectives**

Children will be able to show that they have:

- an interested and motivated attitude to science.
- acquired a body of scientific knowledge and understanding.
- communicated their ideas using appropriate scientific vocabulary and through recording which utilises increasingly detailed diagrams, tables and graphs.
- investigated ideas safely and fairly.
- worked well as part of a team when investigating.
- shown respect for the environment.

Children at Potley Hill Primary School will have access to a science curriculum, which aims to extend and enrich each child according to their ability.

## **Planning:**

The planning for Years 1 to 6 are informed by the National Curriculum KPIs and the Hampshire Science model for Learning and Assessment to ensure coverage, continuity and the progression of scientific knowledge and skills. Science is taught through a cross-curricular approach using progression of skills and based around the 'Hampshire Model for what should be learned.' These key ideas are used to formulate enquiries and investigation whereby children are encouraged to hypothesise, carry out investigations and explain their findings to enable them to make sense of the world in a deep and meaningful way. There is a curriculum map in place which aims to give a broad and balanced arrangement of areas of study and which shows the coverage and progression through the Science curriculum, as well as a progression of skills document and a separate progression of knowledge and key vocabulary covering Years R - 6. Science teaching aims to give children the opportunity to revisit and extend their scientific knowledge in the areas of learning, alongside opportunities to develop their ability to work scientifically and improve their scientific enquiry skills.

Any changes to the National Curriculum will be implemented with these principles in mind.

## **If you walk into Science lessons at Potley Hill, you will see:**

- ✓ Start units with the overarching focus for the unit this could be an experiment or learning knowledge towards an experiment.

- ✓ Key vocabulary for the unit is referred to and visible throughout.
- ✓ Learning objectives are shared with pupils in each lesson.
- ✓ Resources needed, e.g. equipment, are ordered prior to, organised and available for the start of the session in order to maximise learning time.
- ✓ Resources or outside are likely to be used within each session.
- ✓ Ensure outcomes and objectives are challenged through working scientifically as much as possible.
- ✓ Scaffolds to be in place to ensure all pupils make progress
- ✓ Evidence of final piece/outcome either recorded in books, a whole class piece of work (experiments) or in pupil folder on shared drive.

### **Assessment:**

Children are assessed through monitoring of their work, both written and in diagram form, and by judgements made as teachers observe learning and enquiry activities. KPIs, key questions and aims are identified in the medium term planning and teachers will assess children's outcomes against these aims using the following terms:

BLW=Below

WTS= Working towards the expected standard

EXS = Working at the expected standard

GDS = Working at greater depth

Cover pages will be stuck into project books. Children will also be encouraged to write a brief assessment at the end of each topic from Year 1 upwards (these might be scribed by an adult when needed), and teachers will give an assessment on these at the end of the areas studied. Teachers will also keep ongoing records on the foundation subject recording sheets, which identify children working at WTS and GDS in order to highlight children who require support or further challenge and this sheet is passed up through the school with the children.

### **Monitoring and reviewing:**

Monitoring is undertaken by the subject leader through book scrutiny, lesson observations, Pupil Voice sessions and feedback is given to teachers. Findings are recorded in the subject leader's 'subject story' which provides an overview of progress, pupil voice and strengths and weaknesses within the subject. An action plan is developed and implemented each year, linked to the School Improvement Plan. Monitoring at different points is therefore planned and the action plan is evaluated annually.

### **Resources**

Teachers have access to a central resource bank and the school grounds provide an excellent resource for Science. There are a number of books in the library relating to scientific matters and use is made of the School's Library Service to supplement these when required.

### **Citizenship**

The positive personal attributes that Science develops, such as independence, resilience, collaboration and reflection help develop children's learning, reflects the school's values and enables the children to contribute well to the school community.

### **Health and Safety**

The HIASS guidelines for safety at Key Stages 1 and 2 are a minimum requirement of health and safety standards. Relevant areas and safety card numbers are notated on the medium-term planning and these are available to teachers on the school's network. Additional advice will be taken from the CLEAPSS website. A yearly review of safety issues is undertaken in the Summer Term.

**Reviewed: November 2024**

**Next Review: November 2026**