



## **William Penn Science Policy**

### **Rationale**

The delivery of a high-quality, creative Science curriculum encourages children to understand in greater depth, their place in the world. It encourages curiosity, organisation and clarity of thought, positive, respectful debate and open-mindedness of enquiry. Ultimately, it aims to foster a love of learning and respect for creation.

### **Aims**

To enrich and support teaching and learning for all pupils using a range of strategies while encouraging the safe and confident use of technical equipment.

### **Objectives**

#### **Children are encouraged to:**

- ask and answer scientific questions
- undertake scientific research
- sort and classify
- understand fair testing
- make observations and look for patterns
- take measurements over time
- plan and carry out scientific investigations, using equipment safely and correctly
- evaluate evidence
- present their conclusions clearly and accurately
- to link their learning to their personal understanding of the world around them and make connections between Science and other learning disciplines

### **How Our Objectives Are Delivered**

#### **Ethos and Environment**

We recognise that all classes will have children with a wide range of prior knowledge, skills and understanding and therefore we use a range of teaching and learning styles, resources and environments in our lessons. This inclusive method of teaching aims to ensure that all children, regardless of their ability are able to participate, enjoy and learn.

The viewpoints of the pupils are sought and collated by the subject leader and are used to inform and improve the delivery and resourcing of the Science curriculum.

#### **Curriculum and Planning**

We follow the statutory guidance of the National Curriculum for Science. This curriculum is creative and engaging in order to be interesting and accessible to all children.

The subject leader monitors planning annually. Curriculum content is open to review in line with current pedagogical practices and thought, according to the needs and interests of the pupils (with the approval of the Head Teacher, whilst ensuring full coverage of the National Curriculum requirements).

## **Cross-Curricular Science**

Where possible, Science is taught in a cross-curricular context. For example, the study of the water cycle or rocks and soils may reflect simultaneous learning in Geography.

The use of ICT within the Science curriculum is encouraged both for research and investigation ('virtual' Science offers insight into other, possibly inaccessible areas of investigation) as well as in presentation and revision skills. Science teaching reinforces many of the Eco School principles to which we aim to adhere.

School trips are also valuable teaching and learning opportunities, offering a wide range of links between learning. For instance, a trip to the seaside may offer Historical, Geographical and Scientific links depending on the age of the pupils involved.

## **Out of School Hours Learning (OSHL)**

Homework tasks may reflect or extend classroom learning in Science.

## **Health and Safety**

The school is committed to the safe and effective use of all Science equipment and emphasis is placed on safe practice at the beginning of each new topic and through ongoing reminders by staff. The ratio of children to adults is monitored carefully when a greater level of risk is identified (for instance, when working with electricity or cooking/heat). Risk assessments for Science lessons and practical activities are held on the school's central computer system (T drive).

## **Monitoring and Evaluation**

The monitoring of the standards of pupils work in Science is the responsibility of the Science Subject Leader. The work of subject leader also includes supporting colleagues in current trends and requirements in Science and providing a strategic lead and direction for Science in the school. Science is monitored for:

- rigour of teaching practise
- progress and attainment of pupils within each Year Group
- CPD opportunities for staff
- Pupil self-assessment through assessment focuses
- Pupil conferencing

## **Assessment and Recording**

Ongoing assessment is undertaken by teachers both informally during lessons, by marking of books and by half-termly assessments. Teachers focus on the teaching, learning and assessment of scientific skills, for example taking accurate measurements or evaluating evidence. Progress against these skills is recorded using skills templates and data is also input on Target Tracker. Formal assessments are recorded on the school database for tracking purposes. Parents are informed of their child's progress in the end of year report.

Mandatory national assessment is no longer required at the end of Key Stage 2 Science, although the school may still require these pupils to sit equivalent, optional tests which are marked internally in conjunction with West Sussex assessment criteria to give a teacher-informed final grading. All assessments are used by teachers to inform lesson planning in order to maintain high standards of teaching and learning. Pupils are actively encouraged to self-assess and peer-assess their work in order to make well-informed judgements about their own learning and target setting.

## **Resources**

Annual bids will reflect current needs within the school.

The children are expected to help set-up, use and clear away equipment carefully.

Science resources are stored centrally. The storage boxes are organised according to the specific areas of investigation they support (for example, circuit components together, magnifying glasses and mirrors together, magnets and a range of materials together).

Where ICT equipment is used to support teaching and learning, it is kept either in classes or centrally as outlined in the ICT Policy.

The school grounds are a valuable teaching resource. They offer the opportunity for a wide range of Scientific study, especially involving the environment (including our school pond and environmental area, and the chance to study and grow plants).

School visits are encouraged in order to broaden the scientific experiences available to the children and to bring them in to direct contact with experts in various areas of scientific study (planetarium visit, science fairs and museums).

The use of Science learning to enrich Eco and Global school links especially through better understanding of our local environment, is encouraged as a whole school practice.

Signed:

Date: