Science Intent

We want Science at St Philip's to encourage our children to be inquisitive, to question and to think scientifically. The Science curriculum fosters a healthy curiosity in children about our universe. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. We want to support our children to develop in these areas and to equip them to understand concepts and phenomena that occur in the world around them. We want our children to leave St Philip's with the motivation to understand what they see in the wider world, to be able to explain what is occurring, to predict how things will behave and to analyse their causes.

We have designed our curriculum to ensure that children are able to acquire key scientific knowledge through practical experiences, using equipment, conducting experiments, building arguments and explaining concepts confidently. Children are encouraged to ask questions and be curious about their surroundings and have a love of science is nurtured through the whole school. We want to support our children to learn the skills required for scientific enquiry so that they can begin to appreciate the way science will affect their future on a personal, national and global level.

Implementation

Across the school, Science is given the same prominence as Maths and English. Our science curriculum places emphasis on 'Working Scientifically', as well as ensuring that given time, children will develop a high level of understanding by applying practical enquiry skills and building on prior learning.

We follow the National Curriculum. This ensures that the design of our curriculum for Science meets the expectations set out for Key Stages 1 and 2 and, to support us in doing this, we use a range of teaching materials and resources. Developing the skills needed to work scientifically and experiencing hands on Science, is a key priority.

We ensure this this by:

- Giving pupils regular, high quality, hands-on practical experiences across the whole Science curriculum.
- Breaking down the skills of Scientific Enquiry and carefully matching them to appropriate scientific concepts and topics in each phase and year group.
- Ensuring that pupils carry out full investigations, tests and experiments in each year for each topic (where possible).
- Encouraging curiosity and child-lead questioning and investigations where possible.

Learning in science can be delivered in different ways. It can be a discrete lesson, a block of lessons or a sequence of lessons, which often links different subjects and learning experiences. Science topics are often linked with other subjects including English, Maths, Geography, History, ICT, DT, PE and Art. In addition, where possible, we try to ensure that we add to their cultural scientific capital through science theme days and weeks.

In EYFS, Science comes under the area of 'Understanding the World' in EYFS. The new Development Matters includes seasons and the weather, properties of materials, plants, growth and lifecycles of plants and animals, forces, our bodies and senses and habitats. As well as planned whole class topics e.g. the seasons,

animals that live under the sea, we also follow the interests of the children.

Science Progression and Long Term Planning

The Science Subject Leader has created Science progression documents which map our school's curriculum coverage across EYFS, KS1 and KS2. The clear structure and incremental nature of these documents is designed to provide guidance as to what teaching and learning will be covered within particular year groups and key stages.

The progression documents have been designed to ensure that key concepts, skills and vocabulary are embedded across the school, as well as putting in place incremental learning steps which will continue to build on and broaden children's scientific knowledge and understanding.

Children's understanding, capability within and mastery of science will be supported through this progressive curriculum by:

- Using continuous opportunities to retrieve previous knowledge
- Providing opportunities for pupils to apply and secure existing skills and understanding.
- Building new learning onto pupils existing subject knowledge, by highlighting and making links to core threads – key concepts and learning – which run across science modules and the wider curriculum.

By implementing this progressive curriculum for science, we will equip pupils with the key subject knowledge needed to meet the end of Key Stage Attainment Targets of the National Curriculum and the Teacher Assessment Framework for Key Stage 1 and 2.

In science, the curriculum programme of study is broken up into discrete areas:

Plants
Animals including humans
Earth and space
Electricity
Rocks
Evolution and inheritance
Materials
Sound
Forces
Living things and their habitats
Light
States of matter
Seasonal changes

The progression document for each of these strands has built in opportunities to consolidate and embed previous learning. Pupils' existing knowledge will be used as a starting point on which to build, then clear next steps will be implemented in order to support pupils in their development as scientists – ensuring that the understanding and concepts taught expand and extend pupils learning and support their continued progression, knowledge and competency.

Assessment

We assess Science at the end of each unit of work using an End of Unit assessment. This, along with the teacher's on-going assessment of each child, is used to assess the children against the National Curriculum Objectives. These assessments are completed throughout the year once a unit has been completed, and can be used by teachers to identify gaps in learning along with children who may need extra support during Science lessons.