Caton St Paul's C of E Primary School Science Curriculum Statement

INTENT

At Caton St Paul's primary school, our children are scientists! Our intent is to give every child a broad and balanced Science curriculum which nurtures their curiosity and enables them to confidently explore and discover what is around them, so that they have a deeper understanding of the world we live in.'

Vocabulary:

Our intentions for vocabulary in Science is to expose all pupils to year group specific scientific language taking from our school's knowledge and skills progression document. Teachers will share with the pupils the vocabulary that will be required to be used at the start of the lesson. Pupils will be expected to use the vocabulary both verbally and in written form to discuss, reason and communicate about Science.

Knowledge/Skills:

The intentions of Science in school is to create a knowledge and skill led Science Curriculum. Throughout their time at Caton St Paul's, pupilswill be given regular opportunities to practice and apply their scientific skills. Pupils at Houghton will be able to draw upon their Science knowledge, both in Science and across subjects in our curriculum through a range of practical, collaborative and written work.

Progression:

Teachers will plan lessons that cover the knowledge and skills that are expected for each year group. Teachers planning and teaching will ensure they are covering the NC POS for each year group plus the ELGs, knowing what has been taught the previous year and what are the next steps in K&S for the next year group. Teachers will use Science progression documents to plan lessons that build upon K&S and ensure there is a deep understanding so that all children master the learning.

Investigations:

At the heart of our progressive science curriculum is scientific investigation to allow children to develop 'working scientifically' skills. Wherever possible we intend to deliver lessons where children learn through varied systematic investigations, being taught how and provided with opportunities to: ask scientific questions, plan investigations, make predictions, carry out fair tests and find conclusions.

IMPLEMENTATION

Inclusive teaching and learning:

In Science all teachers will implement adapted and personalised teaching approaches, materials and resources that accommodate the learning needs of all pupils.

- Personalised work (adult support, challenge, resources)
- Pre tutoring to teach pupils key vocabulary, knowledge and skills
- Access to resources and equipment to support their acquisition of Science knowledge and skills

Subject coverage/curriculum:

Topics are taught within each year group in accordance with the National Curriculum and EY Framework. Topics are blocked to allow children to focus on developing their knowledge and skills, studying each topic in depth. Every year group will build upon the learning from prior year groups therefore developing depth of understanding and progression of skills. Teachers promote enjoyment and foster interest of the scientific disciplines; Biology, Chemistry and Physics.

The progression document acts as the basis for teachers' planning. It is tightly planned to ensure the breadth and balance of knowledge and skills are covered over time. Teachers follow the progression document closely, and only vary from it with the approval of the subject leader. Teachers create frequent opportunities for pupils to develop and recall knowledge.

Resources:

Teachers use a range of online resources to support their planning and teaching of Science.

STEM Learning, PLAN primary science resources, Twinkl, Hamilton Trust, Explorify (this is not an exhausted list) – teachers share quality resources with each other when discovered and implement.

A variety of high quality texts are available for each scientific topic.

Practical resources are ordered and stored according to each topic including working scientifically.

SMSC:

Science is using evidence to make sense of the world. It has the ability to make us feel both enormously insignificant (compared to the scale of the visible universe) and enormously significant (we are genetically unique). As teachers, we encourage pupils to be both open minded (generating a hypothesis) and critical (demanding evidence) and to use their understanding of the world around them in a positive manner. In Science lessons, pupils consider the social impact (both positive and negative) of science and technology. In Science lessons, we explore and celebrate research and developments that take place in many different cultures, both past and present.

Primary and Early Years overview

EYFS

Science is taught as part of Understanding the World

Primary National Curriculum

From Year 1-6, each class will cover the science topics identified for their year group in the National Curriculum. Working Scenically is taught as part of each topic.

Local context:

Pupils are taught about the local environment and are given opportunities to investigate and make links to the wider world. Children are encouraged to discover science through different external stimuli (trips, visitors and strong links to our locality).

Adaptations and Prioritisation:

Our lessons and evaluations consider the disruption to teaching, and to secure firm foundations before moving on to new learning. Science planning will consider disrupted schooling in the past two academic years. Key knowledge that has been missed will be addressed by prioritizing key learning, particularly that which supports future learning in science and allows children to build their science knowledge throughout their education.

Evidencing teaching and learning:

Each new Science unit will begin with assessing prior learning in a variety of ways. This will show teachers how to explicitly plan for and assess progress from fundamental foundations to greater depth. Each Science unit will have a Knowledge Matrix that details the knowledge the children will need to know by the end of the unit of work. Teachers will use the document to map coverage Children will record their Science work in their Science book, through a combination of written work, worksheets and photographic evidence. A school scrapbook will be kept showing progress across school in working scientifically though the topics.

IMPACT

By the end of the Early Foundation Stage and each Key Stage, pupils are expected to know, apply and understand the knowledge and skills specified in the subject of Science (ELGs and National Curriculum)

Pupil voice:

Our children and young can offer unique perspectives on what it is like to be part of a Science lesson; involving them in decision-making creates a meaningful change and better academic outcomes, as well as facilitating a sense of empowerment and inclusion.

Knowledge:

Science knowledge has been ***mastered*** when a child can confidently and securely talk about this using the scientific language to explain their ideas and can independently apply the knowledge to new learning in unfamiliar situations.

Skills:

All children will have the skills and the resilience to solve problems by applying skills linked to Science to a variety of situations with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios.

Cultural capital:

Our children face unique economic, environmental, and humanitarian challenges. The problem solving required to address these challenges requires solutions that have never been thought of before. In order to tackle these problems, our teachers must challenge the traditional problem-solving methodologies in science lessons and encourage new problem-solving strategies. In science, children will work scientifically to solve problems and explore questions.