St Peter's Catholic Academy Science Policy 2024

OUR MISSION

"Together One Family, One Community in Christ."

St. Peter's recognises that gospel values and the teachings of the church are central to the life of the school. The school aims to create an environment where children can develop physically, emotionally, socially and morally fostering co-operation and communication between home, school, parish and the local community. Together we hope to lead our children towards understanding, tolerance, justice and sensitivity to the needs of others.

Rationale

As stated in The National Curriculum for Science (2014):

"A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave and analyse causes".

Intent

At St Peter's, our aim is to fulfil the requirements of the National Curriculum through a high-quality, broad and balanced science curriculum that ensures the progressive development of scientific concepts, knowledge and skills.

Through our science curriculum delivery, our intention is to provide high quality teaching and learning experiences that:

- Encourage pupils to be curious about the world around them.
- Prepares pupils for life in an increasingly scientific and technological world today and in the future.
- Enables pupils to acquire a growing understanding of the nature, processes and methods of scientific ideas.
- Relate scientific knowledge to real world scenarios and careers.
- Encourage scientific discussion and the application of new scientific vocabulary.
- Encourage a scientific approach to problems, with opportunities to develop working scientifically skills, whilst participating in a range of practical investigations.

Implementation

We have devised a science curriculum that is progressive throughout the whole school, starting with strong foundations for future scientific learning within our Early Years Foundation Stage classes. Activities and experiences are carefully planned within the learning area of 'Understanding the World', whereby children develop new vocabulary and begin to make sense of their physical world.

From Key Stage 1, our curriculum is based upon the 2014 Primary National Curriculum in England: science programmes of study, which provides a broad framework and outlines the knowledge and skills that should be taught in each Key Stage.

The units of work for each year group outlined within the science National Curriculum, is taught within a one year rolling programme. This ensures progression between year groups and guarantees that all content is covered.

The order of the science content for each year group has been carefully considered to allow pupils to apply and build upon their previous knowledge and experiences appropriately. Science is taught consistently, once a week through discrete units and lessons. Pupils revisit and build upon previous knowledge to support them to know and remember more within the science curriculum. There are ample opportunities to develop oracy within lessons through careful questioning and opportunities discussion-based activities, such as ‘Explorify’ and ‘Concept Cartoons’.

At St. Peter’s, we have high aspirations and plan for all pupils to achieve in science through the implementation of ‘Adaptive Teaching’ strategies. Teachers use high quality resources and equipment to create engaging lessons that suit the needs of their pupils. They have access to CLEAPSS Health and Safety guidance to support the safe planning of practical lessons and set clear expectations so that pupils know how to work safely. Pupils have opportunities to work scientifically and investigate scientific questions using the five enquiry types, represented by symbols. These support pupils to recognise the enquiry type and skills that they are using within the lesson.

Our science curriculum is planned to develop the science capital of pupils. Through Forest School, pupils have opportunities to explore their outdoor environment and locality, thus providing real experiences linked to their learning. Regular opportunities for external visitors, trips, workshops and after school clubs are also planned to enrich the science curriculum. Pupils learn about a diverse range of scientists and links are made to a STEM related career within each unit, encouraging high aspirations and informing pupils of the future career paths available to them in the future. We also work closely with the Secondary School within our Collegiate to ensure that our pupils are also prepared and have experiences that give them an insight into the next phase of their science education.

Impact

The impact and measure of our curriculum is to ensure that pupils not only acquire the appropriate age-related knowledge covered within the statutory science curriculum, but also a range of skills that they can apply to their everyday lives.

As a result of the science curriculum, pupils will have:

- A wider variety of skills linked to both scientific knowledge and scientific enquiry skills.
- A richer vocabulary, which will enable them to articulate their understanding of taught concepts.
- An understanding that science has relevance to our everyday lives and can lead to a wide range of career paths for all.

We measure the impact of our curriculum through the following methods:

Regular assessment:

- Formative assessment activities and live marking within lessons. This enables misconceptions to be instantly identified and addressed. Teachers also recognise concepts that may need to be revisited within the next lesson.
- Summative assessment through key questions at the end of each unit. This information can be used by the Subject Leader to evaluate progress and by the next class teacher.
- The implementation of Teacher Assessment of Primary Science (TAPS) plans, as outlined within a progressive whole school plan. This allows teachers to assess pupil's Working Scientifically Skills.

Regular subject monitoring:

- Pupil voice interviews led by the subject leader, where pupils can talk about their learning in science.

Policy written by: Miss A. Bridges

Role: Science Subject Leader

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