Intent, Implement and Impact Statements

Science Curriculum Intent Statement:

It is the intent of The Christ the King Federation Science curriculum to foster in all young people, a lifelong curiosity in the sciences. As one of the core subjects taught in Primary Schools, we give the teaching and learning of science the prominence it requires.

The Scientific area of learning is concerned with increasing pupils' knowledge and understanding of our world, and with developing skills associated with science as a process of enquiry.

Our science teaching offers opportunities for children to:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics.
- Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.
- Be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.
- Develop the essential scientific enquiry skills to deepen their scientific knowledge.
- Use a range of methods to communicate their scientific information and present it in a systematic, scientific manner, including I.C.T., diagrams, graphs and charts.
- Develop a respect for the materials and equipment they handle with regard to their own, and other children's safety.
- Develop an enthusiasm and enjoyment of scientific learning and discovery.

The progressive nature of the curriculum will ensure that children will consolidate scientific knowledge and reinforce key scientific vocabulary from each unit.

In Key Stages 1 and 2, 1.5hrs and 2hrs respectively are allocated to science each week, to allow sufficient curriculum time for pupils to embed what they have learned in long-term memory.

Science Curriculum Implement Statement:

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children can achieve high standards in science.

Our whole school approach to the teaching and learning of science involves the following:

- To ensure high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the school. Links are made across the STEM subjects, and wherever possible, science is linked to class topics, ensuring relevant cross-curricular links.
- Teachers use precise questioning in class to test conceptual knowledge and skills and assess children regularly to identify those children with gaps in learning. Any areas of the curriculum where pupils are likely to hold misconceptions, are explicitly addressed by teachers.
- New vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics so that pupils build knowledge of key concepts and the relationships between them over many years.
- We build upon the learning and skill development of the previous years. As the children's knowledge and understanding progresses, and they become more proficient in selecting, using scientific equipment, collating, and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career. Practical work has a clear purpose, and forms part of the wider teaching sequence, and takes place when pupils have enough prior knowledge to learn from the activity.
- Teachers explicitly teach / demonstrate how to use scientific equipment, and the various Working Scientifically skills, and Scientific processes such as "observation, classification, or identifying variables" are taught in relation to specific scientific knowledge.
- Teachers are encouraged to plan opportunities to enhance children's understanding and enjoyment of science by accessing outdoor learning, and planning trips and workshops/visitors.

Science Curriculum Impact Statement:

Our science curriculum measures progress through a child's ability to demonstrate their scientific skills and knowledge and can be measured in different ways. Learning can be evidenced through regular pupil voice, monitoring and looking at outcomes, which are measured against our year group progression grids. Children are to retain prior-learning and explicitly make connections between what they have previously learned and what they are currently learning.

The impact and measure of this is to ensure that children are equipped with skills and knowledge that will enable them to understand and recognise the uses and implications of science, today and for the future.