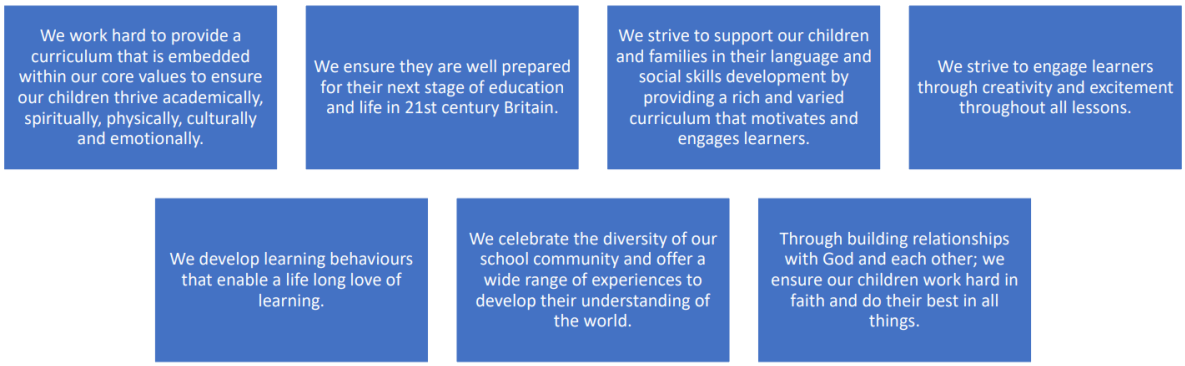
Mission Statement Motto: ***Building relationships with God and each other, working hard in faith and hope to give our best in all things***
Respect, Honesty, Tolerance, Justice, Forgiveness

Holy Cross Catholic Primary School
Intent, Implementation and Impact



Subject – Science

Intent -
At Holy Cross Catholic Primary School, we wish to nurture children's natural curiosity about the world around them so they may develop a lifelong interest in the science. Science is one of the core subjects and we ensure that we give it the prominence it requires. Throughout their time at Holy cross, children will acquire and develop the key knowledge and conceptual understanding within each unit and across each year group. They will learn how to value their own bodies, nature, animals and plants. We will ensure that the Working Scientifically skills and scientific vocabulary are built-on and developed year on year through engaging and creative activities and that children can apply their knowledge in constructing explanations, preparing arguments through evidence and explaining concepts confidently. To ensure our children become critical thinkers, we will continue to encourage them to ask questions and to be curious about the world around them.
Implementation -
Children participate in science which is taught as set out by the year group requirements of the National Curriculum to ensure that children are achieving quality lessons and the skills are being embedded in-depth. Furthermore, it enables the accumulation of knowledge and allows progress in repeated topics through the years. Teachers use the yearly curriculum map, with support from the progression skills map and the *PZAZ scheme*, to plan science lessons and investigations effectively. Teachers follow the curriculum map to ensure the *National Curriculum* objectives are addressed. At the beginning of each unit of work, teachers introduce the knowledge organisers, children complete mind-maps and raise any questions they may have relating to the unit, this information is used to inform teacher's planning. Teachers build upon the learning and skill development of previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting and 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 explicit in lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the theme of the lesson. Working scientifically skills include the following steps - • asking questions • making predictions • setting up tests • observing and measuring • recording data • interpreting and communicating results • evaluating

Pupil voice is used to further develop the Science curriculum and to motivate and engage children. The school provides science-based extra-curricular activities to further engage and enthuse children in the subject.

Impact -

The successful approach at Holy Cross Catholic Primary School results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the natural world.

Younger children (Year 2) explain that, in science, they "Do experiments, predict and test stuff – like if something is water-proof," or "Try to see if something works or it doesn't work."

Older children (Year 5) state that "Science is the study of things around us, like humans, animals or space and states of matter," or that "Science is things in the past and present that help us investigate what happened and what is happening." With one child succinctly saying that, "Science is an exploration of things around us." Older children also acknowledged that scientific thinking changes over time with one citing the geocentric and heliocentric models of the solar system as an example of this. One child was able to name different branches of science as including biology, chemistry and physics.

During pupil conferencing it was very clear that children are enthusiastic about science. One Year 2 child, when asked if he liked science, replied, "Yes, of course," another said that it was his "number-one" subject. When asked what they liked about science, children in Key Stage One were enthusiastic about having the opportunity to do practical work, with one saying that "Getting to test things out – it's really fun – you can see what happens, you might get a really big reaction."

Children from Key Stage 2, when asked what they liked about science, were also enthusiastic, their responses included:

- "Science is very interesting and there is always more to learn, I'm very interested in space."
- "I'm really interested in cardiology and want to be a cardiologist when I grow up." This child also said that cardiology was the study of the heart and that she had learned of it from watching *Holby City* on television."
- "I like doing investigations."

There was evidence that children's interest in science spilled into their lives outside school. Children in Key Stage 1 talked about watching *Wonder Quest* on You Tube, one child in Key Stage 2 spoke of reading books about astronomy and the human body. Another child spoke about looking out for those planets which are visible to the naked eye, one child spoke about having a NASA app and being very interested in the presence of water on Mars and the possibility of discovering life on other worlds.
All the children thought that the school helps them to become interested in science with the main reason for this being that practical lessons were fun and that their learning often surprised them, the various science clubs were also a contributory factor in building enthusiasm for the subject.