All Saints Church School

SUBJECT Intent, Implementation, and Impact Statements

Jesus says…

'All things are possible if you believe'

Mark 9:23

Intent

Science teaching at All Saints Church School aims to give all children a strong understanding of the world around them whilst acquiring specific skills and knowledge to help them to think scientifically, to gain an understanding of science processes and also an understanding of the uses and implications of science, today and for the future.

At All Saints, we aim to embed scientific enquiry skills in each topic and encourage excitement and interest within our children through an initial hook, STEAM activity or outdoor learning experience. STEAM is a process developed by All Saints, building on a published STEM process to include art skills. As a school we have developed the process to be child friendly using a series of emojis to excite our children. Through the 2014 National Curriculum for Science and EYFS framework., we aim to ignite curiosity by questioning why things happen and how things work. Such learning experiences nurture inquisitive minds throughout a child's educational primary journey. Throughout our creative and practical curriculum, we revisit topics in order that children can build upon their prior knowledge and increase their enthusiasm for the topics whilst embedding this procedural knowledge into the long-term memory. Specialist vocabulary for topics is taught and built upon, and effective questioning to communicate ideas is

encouraged. STEAM supports our provision by encouraging children to become independent learners, developing problem solving skills, creativity, collaboration, resilience, and a desire to learn through our creative curriculum. Teamwork and perseverance encompass the acquisition of knowledge, concepts, skills and positive attitudes. Our science teaching enables our children to question the world around them, expiring possible answers for their scientific based questions.

Implementation

At All Saints, Science topics are taught within each year group in accordance with the National Curriculum.

- 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.
- Children explore, question, predict, plan, carry out investigations and observations as well as conclude their findings.
- Children present their findings and learning using science specific language, observations and diagrams.
- In order to support children in their ability to 'know more and remember more' there are regular opportunities to review the learning taken place in previous topics as well as previous lessons.
- At the start of each topic children will review previous learning and will have the opportunity to share what they already know about a current topic.
- Children are given a knowledge organiser at the start of each topic which details some key Science Curriculum Statement information, dates and vocabulary. This is not used as part of an assessment, but to support children with their acquisition of knowledge and are used as a reference document.

- Effective CPD and standardisation opportunities are available to staff to ensure high levels of confidence and knowledge are maintained.
- To support teaching, teachers access a range of resources.
- Effective use of education visits and visitors are planned, to enrich and enhance the pupil's learning experiences within the Science curriculum.
- Teachers use highly effective assessment for learning in each lesson to ensure misconceptions are highlighted and addressed.
- Effective modelling by teachers ensures that children are able to achieve their learning intention, with misconceptions addressed within it.
- Through using a range of assessment tools, differentiation and scaffolding is facilitated by teachers, to ensure that each pupil can access the Science curriculum.
- Children are given clear success criteria in order to achieve the learning intention with differing elements of independence.
- Pupils are regularly given the opportunity for self or peer assessment, which will then be used to inform planning, preparation, differentiation and address misconceptions within that lesson, or for the next lesson.
- Cross-curricular links are planned for, with other subjects such as Maths, English and Computing.
- Our tracking of assessments allows us to use data to inform future practice.

EYFS

The Early Years Foundation Stage Curriculum supports children's understanding of Science through the planning and teaching of 'Understanding the World.' Children find out about objects, materials and living things using all of their senses looking at similarities, differences, patterns and change. Both the environment and skilled practitioners foster curiosity and encourage explorative play, children are motivated to ask questions about why things happen and how things work. Our children are encouraged to use their natural environment around them to explore. Children enjoy spending time outdoors exploring mini-beasts and their habitats, observing the changing seasons, plants and animals. Children regularly participate

in cookery and baking sessions which allows them to experience changes in state as ingredients are mixed, heated and cooled.

Impact

The impact of this curriculum design will lead to outstanding progress over time, across key stages, relative to a child's individual starting point and their progression of skills. Children will therefore be expected to leave All Saints reaching at least age related expectations for Science. Through various workshops, trips and interactions with experts and a detailed curriculum, our Science curriculum will lead pupils to be enthusiastic Science learners and understand that science has changed our lives and that it is vital to the world's future prosperity. We want to empower our children so they understand they have the capability to change the world. This is evidenced in a range of ways, including pupil voice, their work and their overwhelming enjoyment for science.