



## Curriculum Intent Statement – Science

### Here at St Winefride's Science is:

- Exciting when we carry out practical investigations.
- Rewarding when we have opportunities to make mistakes, discuss and learn from them.
- Meaningful when experiments and learning link to real world problems, ideas, and situations.
- Engaging when children ask open ended questions and work scientifically in a team to discover the answer.
- Inspiring when we learn about famous scientists.
- Fun when we have special visitors / events including going on trips and learning outside the classroom.

### Science: Why our curriculum looks like this

Our fun, stimulating, engaging, and challenging curriculum is developed and designed by the staff to ensure that high quality Science education provides the children with the foundations and knowledge and the opportunity and passion to question and understand the world around them.

The children can acquire and increase their key scientific knowledge and vocabulary through practical experiments, using equipment, conducting experiments and explaining concepts confidently.

The curriculum fosters the child's natural curiosity, but excites, stimulates, and develops a healthy curiosity in children about our universe while promoting respect for the living and non-living.

Here at St Winefride's the children will have a wide range of practical experiences to develop their investigation skills, make mistakes, enable them to become more confident independent learners.

The children will be exposed to a range of methods in order to communicate their scientific information and present it in a scientific manner.

Working Scientifically through different types of science enquiries offers opportunities for children to ask and answer questions, make observations and investigate ideas about the world around them.

The curriculum nurtures a culture that everyone is a scientist, whilst providing opportunities to appreciate 'Scientists at work' and inviting scientists into school to work with our scientists.

## Implementation

The acquisition of key scientific knowledge is an integral part of our science lessons. Linked knowledge organisers enable children to learn and retain the important, useful and powerful vocabulary and knowledge contained within each unit. The progression of skills for working scientifically are developed through the year groups and scientific enquiry skills are of key importance within lessons. At St Winefride's Catholic Primary School, teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following;

- Science will be taught in planned, and arranged, topic blocks by the class teacher. Our strategy is to enable all children to be catered for through adapted planning suited to their abilities.
- We plan for problem solving and real-life opportunities that enable children to find out for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning involves teachers creating practical, engaging lessons with opportunities for precise questioning in class to test conceptual knowledge and skills and assess children regularly to identify those children with gaps in learning.
- Our curriculum is progressive. We build upon the learning and skill development of the previous years, which is tested through our 'pre-learning quizzes' where teachers can identify misconceptions that need addressing.
- Scientifically skills are embedded into 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 topics.
- Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts.
- Through enrichment days, such as 'science week', we promote the profile of Science and allow time for the children to freely explore scientific topics.

## Impact

The successful approach to the teaching of science at St Winefride's Catholic Primary School results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the world that they can take with them once they complete their primary education. So much of science lends itself to outdoor learning, and so we provide children with opportunities to experience this. Children learn the possibilities for careers in science as a result of our community links and enrichment activities. Pupil voice is used to further develop the Science curriculum,

through questioning of pupils' views and attitudes towards Science, to assess the children's enjoyment of science, and to motivate learners.

Assessment at St Winefride's Catholic Primary School is teacher based and formed using formal strategies (e.g. periodic year group assessment tasks, quizzes) and informal strategies (Use of KWL grids, verbal/written outcomes, reflection tasks/presentations).

Formative assessment is used as the main tool for assessing the impact of Science at St Winefride's Catholic Primary School as it allows for misconceptions and gaps to be addressed more immediately rather than building on insecure scientific foundations.

Children at St Winefride's Catholic Primary School will:

- Demonstrate a love of science work and an interest in further study and work in this field.
- Retain knowledge that is pertinent to science with a real-life context.
- Be able to question ideas and reflect on knowledge.
- Be able to articulate their understanding of scientific concepts and be able to reason scientifically using rich language linked to science.
- Work collaboratively and practically to investigate and experiment.

Impact *of* learning will be assessed through: Interviews, deep dives, assessing whether children can answer questions about the half term's topic and make links to prior learning etc.