Love God, Love each other, Love Learning

Our Science Curriculum

Intent

Sacred Heart's Curriculum is closely designed around our **school's mission and value statements** and to support the development and needs of the pupils and families we serve. Our curriculum is designed to allow children to **endeavour, enrich and enjoy** their learning.

Following the **National Curriculum** children will discover the different aspects of Science in places locally as well as nationally and globally. Children will learn how to **think like Scientist**, carrying out scientific enquiries and experiencing enrichments such as trips, visitors and hands-on activities. By understanding the use and impact of science in the everyday world, children are encouraged to demonstrate **British Values** including respect for the environment.

Children are encouraged to **ask questions** about the world around them and to understand how to make sense of the world in which they live. *As custodians of our common home we aim to develop the children's love the world around them through science and inspire in pupils a curiosity and fascination for the planet and their place in it for many years to come.*

Topics have been carefully considered by senior leaders to not only follow the National Curriculum but to ensure Science is taught in a **holistic, engaging and real-life way.**

The **Science Long Term Plan** maps out when units of work are taught across each year group and the particular scientific skills that will be a focus at that time.

The **Rainbow Skills** document is categorised into four parts for each year group: Observation and Conclusion, Enquiry, Prediction and Testing, Data Collection and Recording. **Highly effective AfL** questions are also detailed for each part in each year group for teachers to use within lessons to support AfL and to progress pupil's learning.

PLAN planning documentation is used for **Medium Term Planning** this places emphasis on **prior and future learning, key vocabulary, possible misconceptions and assessment activities. Vocabulary** has also been progressively mapped out in the PLAN documents. Teachers use all of the above to plan and deliver a series of high quality lessons for all learners as detailed in the **short term planning**

Sacred Heart Science Long Term Plan.

Implementation

The **'Every Lesson Should'** Rainbow document outlines the core learning activities that are the foundation for any science lesson delivered in '**The Sacred Heart Way'**. Science knowledge and skills, both the disciplinary knowledge and Substantive knowledge within the **Dawn Curriculum,** have been mapped out in **the Rainbow Skills and Planning documentation as stated above**. These documents ensure that learning is sequential and progressive for all year groups; guaranteeing that learning always builds on prior learning.

Short Term Planning has been created to be used for specific lessons detailing specific knowledge and skills to be taught in each lesson. This details specific **learning objectives, 'Steps to Success'** statements **of 'I know…' and 'I can…',** direct teaching instructions (including **Rich Script**) and lesson activities.

Lessons begin with a **review of learning** and contain points within the lesson where children are asked to recall knowledge. This encourages '**sticky learning'**. **Knowledge organisers** are also used to support 'sticky learning'.
Lessons are planned so that children learn **knowledge before skill** and also have the opportunities to develop their science skills.
As well as learning within the classroom setting, our expansive school grounds are used to allow children to put their scientific knowledge and skills into practise. This is complimented by the use of other science **enrichment** opportunities outside of school.

Assessment for Learning and other **formative and summative assessments** allow teachers to make reliable assessments of pupils throughout the year. In this way, pupils' progress within and across the disciplines of science is measured robustly.

Impact

The impact of the curriculum is monitored rigorously by the subject lead throughout the academic year; to ensure all children benefit from access to **high quality science teaching**.

This is done through lesson observations, pupils voice, analysing assessment outcomes in attainment and progression, looking at planning, work in books classroom displays and having discussions with teaching staff. These are used to inform the quality of learning and understanding that pupils have gained in science.

As a result, and upon leaving Sacred Heart, our children gain the ability to think like a scientist, work like a scientist and understand scientific concepts and know how science is used in many areas of our everyday life**.** They **develop a love of Science** and the knowledge and skills required to develop this passion still further into adulthood.

As in all other areas of the curriculum, **assessment** is an integral part of the teaching process.
1. Looking at a child's recorded work i.e. model, photographs, written work.
2. Individual discussion.
3. Listening to the children's ideas as they discuss between themselves.
4. Group discussions in both planning and reporting back sessions.
5. Observing the children's skills in Science.
6. Recording the progress that children make by assessing the children's work against the learning objectives for their lessons.

Children's progress in Science is **formatively assessed** at points during the unit of work and **summatively assessed** at the end of each unit and teacher assessments are recorded on Target Tracker. It is then reported to parents through the pupil's annual report. **PLAN exemplification**, **TAPs** assessments and **Rising Stars** assessments are all used along with **AfL techniques** to aid accurate individual assessments of pupil's attainment

Sacred Heart Progression of Science Working Scientifically Skills Document

Sacred Heart Progression in Scientific Knowledge Document

Sacred Heart Progression in Scientific Vocabulary Document