OUR LADY OF LOURDES
CATHOLIC MULTI-ACADEMY TRUST

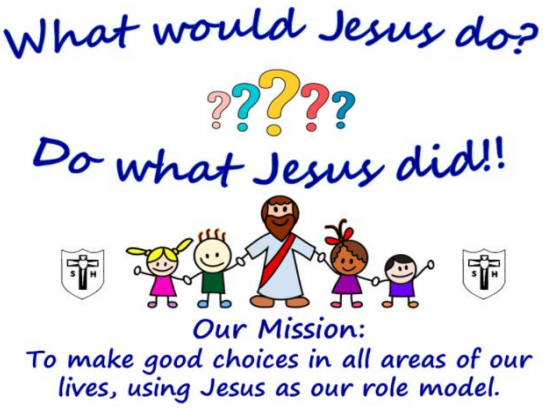
Sacred Heart Primary CVA

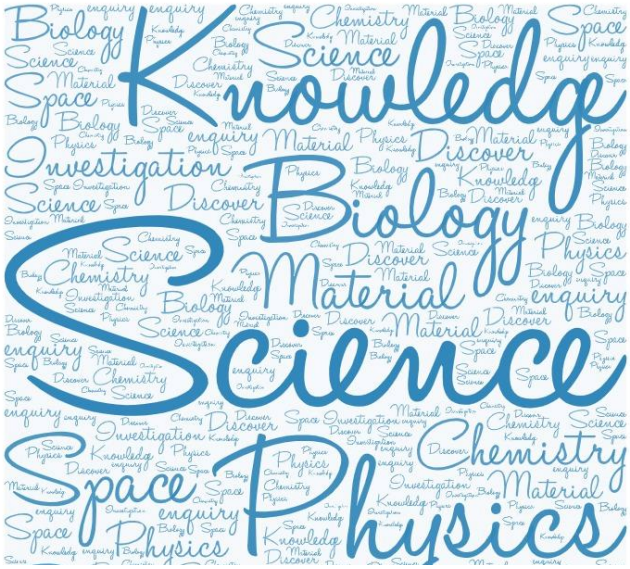
Our Science Policy

Science is a way to understand our world by carefully thinking about it and testing our guesses with observations and experiments.

The Patron Saint of Science is:

Saint Gianna Beretta Molla





Intent

At Sacred Heart CVA, the intent is to offer a knowledge-rich curriculum which is broad and balanced and ambitious. We hope to inspire our children by giving them the opportunities to pursue their natural curiosity; promoting the experience of exploring and investigating the world around them in a range of contexts, to ensure a continually evolving knowledge and understanding. Cross curricular links are made between Science and other subjects to consolidate their learning further. Our Science curriculum will build on the knowledge and understanding of all children, whatever their starting points, as they progress through each Key Stage.

The national curriculum for science aims to ensure that all pupils:

- 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
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

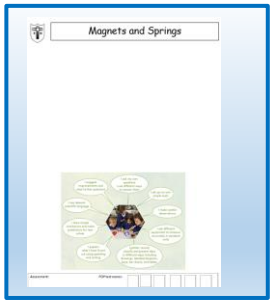
Through high quality teaching, we aim to:

- Stimulate and excite pupils' curiosity about changes and events in the world;
- Satisfy this curiosity with knowledge;
- Engage pupils as learners at many levels through linking ideas with practical experience;
- Help pupils to learn to question and discuss scientific issues that may affect their own lives;
- Help pupils develop, model and evaluate explanations through scientific methods of collecting evidence using critical and creative thought;
- Show pupils how major scientific ideas contribute to technological change and how these impacts on improving the quality of our everyday lives;

Implementation

Link to the 2014 National Curriculum

Our curriculum is built upon our knowledge-rich curriculum and retrieval practice where the children are exposed to previous learning from last week, last lesson, last month and last year. At the start of every new unit, the pupils explore their related knowledge, this could be subject specific or transdisciplinary knowledge. At the end of the unit, the pupils add to this knowledge for ease of reference in the future. This encourages them to build on their knowledge from one year to the next. The pupils work travels with them through KS1 and then through KS2 so they always have reference points to previous learning.



We use a variety of teaching and learning styles in our Science lessons. We believe in whole-class teaching methods and we combine these with enquiry-based questions to focus each lesson.

We encourage children to ask as well as answer scientific questions and facilitate a high ratio of thinking and participation.

Science is taught half termly to allow children to continually access their scientific knowledge from their long-term memory and embed their skills but also to achieve depth in their learning. Teachers have identified the target knowledge and vocabulary of each blocked topic and consideration has been given to ensure progression across topics throughout each year group across the school.

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 engaging lessons, involving high-quality resources to aid understanding of conceptual knowledge. Teachers will use precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning, so that all children keep up.

Working 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.

	Year							
Term	F1	F2	1	2	3	4	5	6
Advent	KUW Family Sense, body parts, my school, keeping healthy	Animals	Human Body	Animals including Humans	Animals Including Humans	Teeth	Animals Including Humans	Living things and Inheritance
	The four Seasons	The four Seasons	The four Seasons	Floating and Sinking	Forces and magnets	Digestion	Forces	Circulatory System
Lent	Materials	Properties of Materials	Everyday materials	Materials	Rocks and Soils	Sound	Micro Organisms	Evolution
	Plants and Animals	Plants	Properties of Materials	Living things and their Habitats	Light and Dark	States of Matter	Earth Moon and Sun	Light
Pentecost	Living things and the Environment	Life Cycles	Plants	Changing materials	Plants	Electricity	Materials- dissolving and mixing	Electricity
	Animal Life cycles	Floating and sinking	Animals	Plants	Nutrition	Living Things	Plants	
Discipline	Biology		Physics			Chemistry		

EYFS

Play underpins the delivery of all the EYFS. Within a secure and challenging environment with effective support, children can explore, develop and experiment as they play to help them make sense of the world. The EYFS strand 'Understanding the World' leads directly to scientific elements of the curriculum and leads to more formalised Science learning in KS1 and 2.

Key Stages 1 and 2

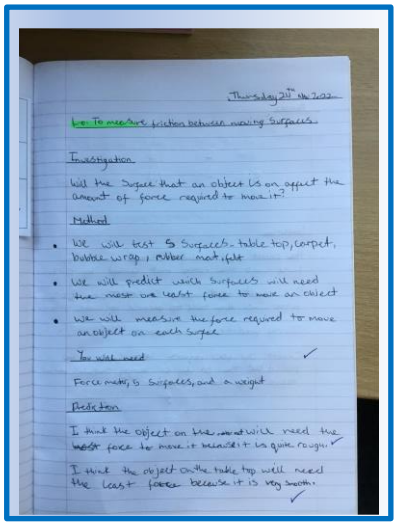
We build upon the learning and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.

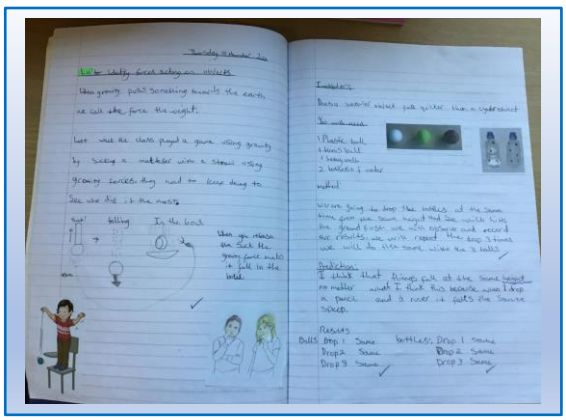
Monitoring

The Science leader and senior management are responsible for observing practice and monitoring the quality and impact of geography teaching and learning.

Monitoring throughout the school takes place whereby the subject leader:

- ✓ Updates the staff expectations document for Science ensuring it is clear and concise.
- ✓ Planning – checking for coverage of knowledge, supports teachers via discussion of our whole- school progression map to adapt and make changes if necessary.
- ✓ Book audits and Pupil voice.
- ✓ Reviews resource provision.
- ✓ Discusses regularly with the Headteacher, the progress implementing this policy within school.
- ✓ Curriculum link governor will also visit to see 'Our Curriculum' in action.





Assessment and Feedback

Teacher's record the progress made by children against the learning objectivesfor their lesson by assessing if they have achieved the Key Question, by highlighting this green or orange.

Feedback is given to pupils in line with our feedback policy. This is often verbal and, in the moment, to enhance pupils' progression.

Written reports to parents and governors will occur annually

Ideas to be Scientists at home:

You can visit Mansfield Museum that has lots of Science activities in or visit:

https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study BBC Bitesize

https://www.science-sparks.com/

https://www.wildlifetrusts.org/

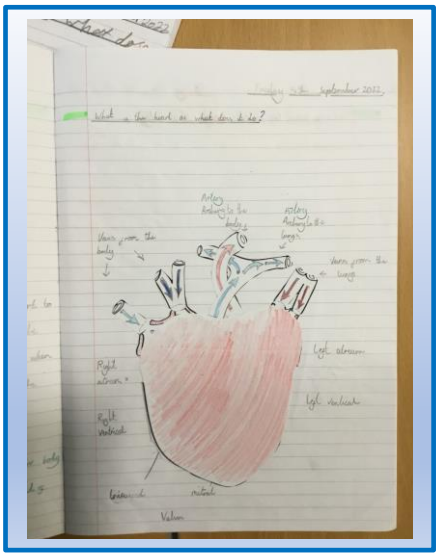
https://trainlikeanastronaut.org/

https://www.sciencekids.co.nz/experiments.html

https://www.nasa.gov/kidsclub/index.html

Development Points

1. Embed new progressive curriculum – revise and revisit as needed
2. Introduce pre- learning sheets per units to ascertain prior and new knowledge
3. Embed TLaC teaching strategies and retrieval practice within the science curriculum



Policy written: October 23 Written by: K Dames Review: Every 2 years