Our Lady of the Assumption Catholic Primary School

Approved Science Policy

Our Mission Statement:

'Love One Another As I Have Loved You' (John 13:33-34)

Approved by Full Governing Body: 30th March 2021

Signed **Chair of Governors.**

Reviewed May 2025 by Niamh Punch
To be reviewed: May 2027

Safeguarding Statement:
'Our Lady of the Assumption Catholic Primary School is committed to safeguarding and promoting the safety and welfare of all children and expects all staff, parents, governors and volunteers to share this commitment.'

Our Vision
As a Catholic school that puts Christ at the centre, we are committed to encouraging everyone to 'Be the Best They Can Be'

Values and Ethos
We believe that everyone is made in the image and likeness of God and we value the equality of all, reject discrimination of any kind, and welcome the diversity of different cultures.

Intent
Our Science curriculum fosters a healthy curiosity in children about our universe and encourages children to ask questions about the world we live in. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes.

Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group, as well as the application of scientific skills.

Pupils are expected to develop scientific knowledge through hands-on investigations, promoting critical thinking and problem-solving skills. We ensure that the Working Scientifically skills are built-on and developed throughout children's time at the school so that they can apply their knowledge of science when using equipment, conducting experiments, building arguments, explaining concepts and continue asking questions.

Science teaching aims:
- To deliver the Science Programmes of Study of the National Curriculum.
- To promote learning through a wide variety of teaching and learning styles.
- To develop investigational skills through relevant practical tasks.
- To promote positive attitudes to the learning of science.

- To foster a sense of curiosity and enquiry among pupils.

Through developing science skills pupils should acquire knowledge and understanding of:

- Life Processes and Living things
- Materials and their Properties
- Physical Processes

Science has strong cross-curricular links and improves children's communication skills, numeracy, ICT, ability to work cooperatively and problem solving.

Implementation
At Our Lady of the Assumption School, we use the National Curriculum aims matched to each year group to ensure progression and development each lesson. All units of science from the National Curriculum are mapped out in the school's long- and medium-term planning and refined in short term planning. This ensures statutory content and skills are covered.

Science is taught in weekly lessons and is also delivered through cross-curricular links in other subjects. WhiteRose Science resources are used to support the teaching of science.

We aim:
- To ensure that science lessons include working scientifically
- To plan the enquiry types, as mentioned in the National Curriculum, into lessons (disciplinary knowledge)
- To increase understanding of the enquiry skills needed in practical science lessons (transferable skills)
- To use substantive knowledge from NC Programmes of Study as part of a practical lesson

We have focused our learning around the key areas of enquiry skills and approaches and each lesson has a targeted skills or approach.

Enquiry skills:

- Asking questions
- Making Predications
- Setting up tests
- Observing and measuring
- Recording data
- Interpreting and communicating results
- Evaluating

Enquiry Approaches:

- Comparative and fair testing
- Research
- Observation over time
- Pattern-seeking
- Identifying, grouping and classifying
- Problem solving

We endeavor to develop a set of attitudes in our children which promote scientific ways of thinking. Working Scientifically is embedded into lessons to ensure skills are progressively developed across the key stages. New vocabulary and challenging concepts are introduced through direct teaching and displayed in the classroom to support children's learning throughout units.
Beginning each lesson with the language 'as scientists we are…' followed by the types of enquiry, encourages students to refer to themselves as scientists, as well as challenging pupils to ask questions and reflect and review their learning.

Where possible, there will be an emphasis on practical, investigative science. Practical work is not only a fun way of learning but also enhances children's understanding of scientific concepts.
Lessons will begin by recapping previous learning to build upon knowledge and skill development from previous lessons.

Teaching and Learning
A variety of teaching styles are used to teach science, with an emphasis on practical and investigative activities that enable children to develop their knowledge, understanding and skills through first-hand experience. At Our Lady of the Assumption we aim to carry out **at least** one thorough investigation for each topic taught. We recognise that there are times when a more formal style is necessary along with demonstrations by the teacher to avoid misconceptions.

Children may be taught as a whole class, work in a group or individually. The groups may be of mixed or matched ability. Activities are differentiated for different ability levels and children with special needs will be supported within the classroom.

We understand the importance of educational visits and outside agencies and visitors coming in to talk with the children to enhance learning.

An annual Science Week is planned to allow science experiments to be carried out to encourage thinking and ensure science is kept fun and interesting.

These topics will be covered for each year group					
Year 1	Humans	Everyday materials	Plants	Animals	Seasonal Changes
Year 2	Animals, including humans	Uses of everyday materials	Plants	Living things and their habitats	
Year 3	Animals, including humans	Rocks	Light	Plants	Forces and magnets
Year 4	Living things and their habitats	States of matter	Sound	Electricity	Animals, including humans
Year 5	Forces	Earth and space	Properties and changes of materials	Animals, including humans	Living things and their habitats
Year 6	Living things and their habitats	Electricity	Light	Animals, including humans	Evolution and inheritance

Recorded Work
Scientific work is recorded in a variety of ways appropriate to the age of the children and their individual needs in each key stage. This can include teacher observations, photographs, drawings, tables, graphs, written accounts and formal write ups. It is expected that all recorded science work is to be presented to a high standard but not to the detriment of science investigations or the teaching and learning aspect of

the lesson. The balance of practical activity and length of recording tasks is carefully planned to maintain a scientific emphasis.

Assessment
Throughout each topic, teachers will monitor pupils' progress in scientific knowledge, understanding and skills through:

- Observations during lessons
- Marking work
- Discussion with Pupils

At the end of each topic, teachers will assess their class against the National Curriculum aims. Children will be assessed as at age expected standards or working towards age related expectations. As a school, we have removed the term 'greater depth' for science to ensure learning is deepened and children receive a broaden scheme of science.

At the end of the year, teacher's will assess the children for working scientifically taken from the National Curriculum.

Monitoring
The subject leader for Science will speak to pupils, carry out book monitoring alongside Senior Leadership Team, monitor planning and carry out learning walks which will identify areas of success and areas to develop. The impact of the above will be recorded.

Equal Opportunities
At Our Lady of the Assumption we ensure that all children have the right to access the curriculum. We aim to meet the needs of all our children by differentiation in our science planning and in providing a variety of approaches and tasks appropriate to ability levels. This involves providing opportunities for SEND children to complete their own projects, with support, to develop speech and language skills, as well as scientific skills and knowledge. This will enable children with learning and/or physical difficulties to take an active part in scientific learning and practical activities and investigations and to achieve the goals they have been set. High attaining children will be encouraged to deepen their knowledge and understanding.

Health and Safety
Health and Safety issues are considered in planning science work. All teachers, children and other adults in school are expected to be aware of the need for safe working at all times. If any of these groups are unsure of anything, then they should consult with the Subject Leader for extra help and advice.

Resources
There is a central store of resources in our Phiz Lab. It is the responsibility of each adult to keep the resources neat and tidy and to tell the subject leader if any resources need replacing.