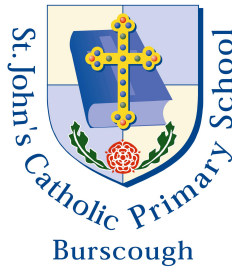


St. John's Catholic Primary School



Science Policy.

September 2021

INTENT:

Vision

In God's Love We Shine Together

".....We aim to nurture life-long learners, able to pose questions, seek answers, think creatively and rise to a challenge. Through excellent and creative teaching that raises the esteem and ambition of all our pupils, we aim to foster a love of learning and enjoyment and enthusiasm for life.....

Each will be encouraged, challenged and inspired to fulfil his or her potential and play his or her own unique part in God's plan..."

This is particularly apt as science is all about making sense of the world around us and how things function and inter-relate. To fully explore the nature of the world requires us to use key learning skills such as problem solving, enquiry, reasoning, creativity information processing, evaluation and communication. When planning for science activities teachers should bear these skills in mind and plan activities that nurture such skills. Learning does not take place in isolation and the social and emotional aspects of learning should also be developed through science. These attributes or aspects include self-awareness, managing feelings, motivation, empathy and social skills.

"Science stimulates and excites pupils' curiosity about phenomena and events in the world around them. It also satisfies this curiosity with knowledge. Because science links direct practical experience with ideas, it can engage learners at many levels. Scientific method is about developing and evaluating explanations through experimental evidence and modelling. This is a spur to critical and creative thought. Through science, pupils understand how major scientific ideas contribute to technological change - impacting on industry, business and medicine and improving quality of life. Pupils recognise the cultural significance of science and trace its worldwide development. They learn to question and discuss science-based issues that may affect their own lives, the direction of society and the future of the world."

QCA

Science in the national curriculum

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 enquiry 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.

Breadth of study

Pupils should be taught the knowledge, skills and understanding through:

- A range of domestic and environmental contexts that are familiar and of interest to them.
- Looking at the part science has played in the development of many useful things.
- Using a range of sources of information and data, including ITC based sources.
- Using first hand and secondary data to carry out a range of scientific investigations including some complete investigations.

Communication

Pupils should be taught, *progressively*, to use appropriate scientific language, including SI units of measurement to communicate ideas and explain the behaviour of living things, materials, phenomena and processes.

Health and safety

Pupils should be taught to recognise that there are hazard in the living things, materials and physical processes, and assess risk and take action to reduce risk to themselves and others.

A copy of 'Be Safe', produced by ASE, is available for consultation by members of staff, from the Coordinator.

Learning outside the classroom

Providing opportunities for outdoor learning is at the heart of our curriculum and we are the second school in the country to be awarded the LoTC gold mark.

Our school is fortunate to have extensive grounds and access to a local forest where expert conservationists, including members of the British Trust for Ornithology, provide a number of enriching experiences for the children, in addition to the usual activities in Forest School. These include:

- Bird ringing
- Small mammal surveys
- Planting wildflowers
- Building willow structures
- Calculating tree height
- Planting fungal spores
- Surveying and weighing earthworms and other small invertebrates

Not only do these equip the children with an excellent breadth of knowledge and enable them to work scientifically, but develop important skills, such as:

Maths: measuring, weighing, recording, Constructing and analysing data

PSHE: teamwork, perseverance, resilience, risk management, language and communication.

Teachers routinely identify opportunities to take the curriculum outdoors and these are highlighted in medium term plans. The classes plan trips and visits to support the science curriculum. Some examples include taking part in building the world's largest bug hotel in partnership with Martin Mere, Spaceport in Liverpool, the museum of science and industry in Manchester and Chester Zoo to support the Darwin topic.

We have also had visits from parents that work in the field including a developer of 3D printing technology, CAVE (Computer augmented virtual environment) and nursing.

IMPLEMENTATION OF SCIENCE AT ST JOHN'S

- Key Learning Documents derived from the National Curriculum are used for medium term planning. The order in which units of work are taught is decided through the whole school development of a long-term curricular map.
- Average recommended time spent on science per week are;
KS1 1.5 hrs
KS2 2 hrs
These may be blocked to suit the best method of delivery within the class.
- Working scientifically should be embedded across the whole of the science curriculum.
- Evaluation of medium and short term planning is seen as on going.

It is the role of the science coordinator to ensure that the statutory requirements are covered and to use assessment data from teachers to monitor attainment and progress for groups of pupils.

ASSESSMENT

Assessment is seen as on-going and part of usual methods of assessing children's learning in the course of teaching. These will include questioning, observations, peer and self-assessment, marking of work and discussions with pupils etc.

At the end of each unit of work, teachers will assess whether children are on track to meet the year group expectations and annotate their plans. Some indication of how judgements were reached will be noted.

Staff meetings within school and moderation with local schools will be scheduled into the Monitoring Plan.

Teachers will assess children as emerging, expected or exceeding against the year group expectations at the end of the year

RESOURCES

- School subscribes to Primary UpD8 and Lancs scheme – Inspiring Primary Science, Cornerstones and the ASE

MONITORING AND EVALUATING

In line with the subject leader policy the subject leader will monitor pupil achievement and the quality of learning and teaching in science.