



**St Leo's and Southmead Catholic
Primary School serving the
Community**

Science Policy

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Science Policy September 2017

Our Mission Statement

"In our school together we want to celebrate God's gift of life by inspiring, enhancing and developing tomorrow's talent, today! We respect all; aiming to achieve and live our values. A place to allow evryone to flourish!"

Safeguarding statement

In the light of current legislation, we fully acknowledge our duty to safeguard and promote the welfare of all children. We recognise and uphold the statutory regarding Child Protection. Through our day to day contact with pupils and direct work with families, we have a crucial role to pay in identifying indicators of possible abuse or neglect and referring them to the appropriate agency.

We acknowledge all children can be subject to abuse regardless of age, culture, race, social background, gender or ability. All children have a right to grow up safe from harm.

This policy sets out how St Leo's and Southmead governing body discharges its statutory responsibilities relating to safeguarding and promoting the welfare of children who are pupils at the school. In line with Working Together to Safeguarding Children 2006, the definition of safeguarding for this policy is as follows:-

- Preventing children from maltreatment
- Preventing impairment of children's health or development
- Ensuring that children grow up in circumstances consistent with the provision of safe and effective care and
- Taking action to enable all children to have the best outcomes

Undertaking that role so as to enable those children to have optimum life chances and enter adulthood successfully.

Child protection is a part of safeguarding and promoting welfare, which refers directly to activity that is undertaken to protect specific children who are suffering or are at risk of suffering significant harm.

PROMOTING BRITISH VALUES AT ST LEO'S AND SOUTHMEAD CATHOLIC PRIMARY SCHOOL SERVING THE COMMUNITY

At St Leo's and Southmead Primary School we aim to help, guide and prepare our children as future citizens. As our Mission Statement says, our school is "A place to allow humanity to flourish!" This statement permeates everything that we do in school and captures what British Values are about:-

- Democracy
- The Rule of Law
- Individual Liberty
- Mutual Respect
- Tolerance of those of different faiths and beliefs.

We grasp every opportunity throughout the school day to teach, model and show by examples all of the above. We have provided further information on our school website. We are proud of our school and are proud of the British Values that we live and learn about.

What is Science?

Science is a body of theory and knowledge, which allows us to make sense of the physical, material and biological aspects of the world around us. It is based on the experimental testing of ideas and is organised in a logical way, built on a unified system of concepts. Scientific methodology gives us practical and reliable ways of finding out the answers to our questions about the physical world. Science has changed our lives and is an essential part of our ever changing world.

The aims of teaching Science

At St Leo's and Southmead Primary school, science education aims to equip pupils to ask questions about, and understand the world in which they live and will work. It seeks to do this by enabling pupils to:

- Develop their natural curiosity about the world around them;
- Develop their ability to think independently and raise questions about working scientifically
- To develop confidence in the full range of practical skills, for example planning and carrying out scientific investigations

- Understand the scientific principles that underline the natural and social world such as objectivity, perseverance, open mindedness and acceptance of the value of teamwork;
- Build up a body of scientific knowledge to provide a basis for future enquiry and its application in past, present and future technologies;
- Become effective communicators;
- Appreciate the impact of science on society and the individual;
- Appreciate the developmental nature and limitations of scientific knowledge.

To achieve these aims all pupils will study a broad and balanced science curriculum, based on the theory and practice of science, including ample opportunities for appropriate and investigative work.

The National Curriculum 2014, of which science is a core subject, provides a basis for such study and should be seen as the entitlement for all pupils, with modification only being necessary for a small number of students.

The principles of teaching science

At St Leo's and Southmead School all the pupils will have the opportunity to study the National Curriculum 2014 for science at levels which are appropriate to their needs. This will provide a framework for which pupils are able to:

- Acquire scientific knowledge and understanding;
- Make observations and measurements;
- Design and carry out experiments designed to test hypothesis;
- Record, interpret and communicate in a variety of ways;
- Handle equipment correctly and safely;
- Solve problems using their knowledge and understanding of science;
- Draw appropriate conclusions through interpreting data;
- Consider moral and ethical questions raised by current or historical research.

Strategies for the teaching of Science

At St Leo's and Southmead School, pupils will learn about science through carrying out experimental and investigative work whenever possible. Each topic will start with a challenge question which is designed to develop the children's scientific thinking and an enquiry based approach to learning. Learning will also draw on the everyday experience of pupils and on the industrial and environmental applications of science. Science will be a relevant and enjoyable part of the curriculum for all pupils.

In the Early Years Foundation Stage the children work on practical activities designed to help them to work towards the Early learning goals as described in Knowledge of the World.

In Key Stage One and Two the National Curriculum programmes of study are followed from Years one through to Six and is supported by Plan Bee and Rising Stars assessment. Throughout the years the children will be 'working scientifically', this will be embedded into and interwoven through the teaching of science in order to enable the children to understand the nature, processes and methods of science for their year group.

Spiritual, moral, social and cultural aspects

At St Leo's and Southmead School opportunities to promote, appreciate and develop pupils spiritual, moral, social and cultural awareness and understanding will be sought. These opportunities will be clearly identified in planning and promoted in practice.

English, Mathematics and Computing

Opportunities exist within science for the enhancement and development of key skills and concepts in English, Mathematics and Computing. These opportunities should be clearly identified in practice.

Science allows for the development of Mathematics in a number of ways:

- Collecting and interpreting data;
- Communicating and presenting scientific data in appropriate forms such as bar charts, pictograms, tally charts, tables and graphs;
- Estimating, checking and evaluating results.

Science allows for the development of English in particular in a number of ways:

- Communication in both speech and writing;
- Reading, listening and writing skills;
- Developing and using a range of scientific vocabulary;
- Following and giving instructions in both speech and writing;
- Reporting findings;
- Explaining predictions and hypothesis
- Describing outcomes and conclusions

Science allows for the development of Computing in particular competence in a number of ways:

- Collecting data and information
- To use search engines effectively to research
- To evaluate and present data and information
- Modelling

In particular the teaching of science will:

- Be delivered with adequate subject knowledge;
- Be challenging to pupils of all abilities;
- Be based on a variety of teaching and learning strategies;
- Be based upon practical work wherever possible;
- Start from pupil's existing knowledge and experience;
- Take account of pupil's previous study of science (continuity);
- Move logically through the programmes of study to allow increasingly sophisticated ideas to be taught at appropriate levels (progression);
- Develop specific skills and knowledge by direct teaching. This will at times involve whole class teaching and there will be to provide opportunities for practice and consolidation through class work and homework;
- Be differentiated to meet the needs of the ability range being taught;
- Be well planned to include specific learning objectives for each lesson;
- Include appropriate assessments which will be used to inform future planning;
- Be well managed and well disciplined, paying due regard to the health and safety of all involved;
- Be based on firm commitment to deliver quality in the classroom and be monitored to ensure that this happens;
- Make good use of non-teaching support;
- Be adequately resourced.

Assessment, recording and reporting

(Please refer to St Leo's and Southmead Assessment policy)

Pupils will be regularly assessed against learning objectives to inform planning and to ensure appropriate teaching and learning opportunities. End of topic assessments will be undertaken as well as the children's progress being monitored and tracked during the whole school assessment weeks.

Monitoring

The monitoring of teacher's planning and their assessment of pupil's work and progress is the responsibility of the science co-ordinator. This will be carried out through classroom observations, scrutinizing pupils' work, assessment information and teacher's short term planning. There will be regular feedback to the head teacher.

Thank you for your co-operation

This policy was reviewed September 2017 and will be reviewed again September 2018