



St Luke's C.E. Primary School

Science Policy

Langport Avenue

Longsight

Manchester

M12 4NG

Statement:

St Luke's Primary School understands the need for all pupils to develop their Scientific ability as an essential component of all subjects and as a subject in its own right. A high quality science education provides the foundations for understanding the world. It involves a systematic study of the natural and physical world, leading to the drawing of conclusions. It is important to build upon the natural curiosity, awe and wonder that children have and to encourage them to embrace this, through techniques such as open questioning. Children should be provided with opportunities to develop their existing understanding through a range of experiences, such as practical experimentation and investigation, in order to open their minds to the social and cultural aspects of the world around them.

Aims:

At St Luke's Primary school, we believe science is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills. We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability.

Through Science, in our school we aim to:

- Encourage the development of positive attitudes towards Science.
- Foster curiosity: children's enthusiasm and curiosity for science is promoted at every opportunity.
- Prioritise practical: pupil led practical 'hands on' science learning is planned for and maximised, giving a real life context where possible.
- Have fun: science is engaging and fun.
- Promote talk and deeper thinking: 'Bright Ideas Time' is used as an effective tool to promote questioning and generation of ideas.
- Be scientific: correct (age-appropriate) scientific vocabulary is confidently used and modelled by staff.
- Get outside: the outside area and locality are utilised to provide regular outdoor learning experiences.
- Practise safe working in accordance with the Primary Schools Code of Practice.
- Encourage open-mindedness, self-assessment, perseverance and developing the skills of investigation – including: observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Make cross-curricular links between Science and other subjects and apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data.
- Equip pupils with the scientific knowledge required to understand the uses and implications of science, today and for the future.
- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.

Implementation and Planning:

Science is a core subject in the National Curriculum. Statutory requirements for the teaching and learning of Science are laid out in, 'The National Curriculum in England Framework Document for Teaching', September 2014 and the 'Statutory Framework for the Early Years Foundation Stage', September 2014.

KS2, KS1 and Foundation stage teachers should be teaching Science for a minimum of two hours each week or equivalent pro rata.

Science will be taught as sequenced units of work that develop specific areas of knowledge and understanding throughout KS1 and KS2. 'Working scientifically' will be embedded within the content of biology, chemistry and physics, so that pupils learn to use a variety of approaches to answer scientific questions. These will include observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Activities will be planned in such a way as to ensure equal access for all children. Where possible Science will be linked to topics but will also be taught through discrete lesson to ensure coverage of the curriculum.

Science pervades every aspect of our lives and we will relate it to all areas of the curriculum. We will also ensure that pupils realise the positive contribution of both men and women to science and the contribution from those of other cultures. We will not only emphasise the positive effects of science on the world but also include problems, which some human activities can produce.

Planning and curriculum coverage will be monitored by the Science Subject Leader.

[Click here for National Curriculum link](#)

Assessment, Recording and Reporting of Attainment:

We use assessment to inform and develop our teaching.

- We assess for learning (AfL). Children are involved in the process of self-improvement, recognising their achievements and acknowledging where they could improve. Activities during, and at the end of, each topic record achievement and celebrate success.
- Weekly evaluations are done and teachers upload the information to trackers.
- We mark each piece of work positively, making it clear verbally, or on paper, where the work is good, and how it could be further improved and by asking questions designed to extend and scaffold further learning.
- By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study. This will be tracked and monitored over time.
- The Y2 and Y6 staff assesses children's attainment formally at the end of the KS1 and KS2 programmes of study. This teacher assessment is based on assessment records and work samples.
- Reports to parents are written once a year, describing each child's attainment in science through our topic based approach.

Classroom Management:

A range of teaching methodologies will be employed, depending on the age and ability of the children and the nature of the skills and knowledge being taught. At St Luke's we have a flexible timetable to allow all children to learn at their pace and ability. Children will participate in both guided and investigative practical work and activities where secondary sources of information are used. They will work individually, in groups and as a whole class.

Scientific vocabulary will be introduced, alongside explanations of meaning and children will be encouraged to articulate scientific concepts clearly and precisely. The classroom organisation and planning will take into consideration the differentiated needs of pupils, including the more able.

Monitoring and Evaluation:

The Science Subject Leader will be responsible for monitoring and evaluation of Science planning, teaching and work throughout the school.

Inclusion and Equal Opportunities:

We are committed to ensuring that all pupils are able to access a broad, high quality curriculum and therefore we follow our accessibility policy. In order to meet the additional needs of individual SEND pupils at St Luke's, we tailor resources, organise the classroom environment and buy in further resources as and when the need arises.

[Click here for our Accessibility Policy](#)

Health and Safety:

Children will be informed of any risk or hazard but will also be encouraged to assess and identify risks for themselves, before beginning any scientific investigation. They will be shown how to use scientific equipment safely and advised, when appropriate, how to move around the classroom in a safe manner. Care will be taken to ensure micro-organisms are carefully sealed and stored in a separate location, to prevent risk of contamination.

Promote SMSC and British Values:

Individual liberty of own views, tolerance and mutual respect of others views is taught through the topics where different views / ethics are involved. This includes the topics of evolution versus creation, genetic modification, selective breeding, stem cell research and animal testing.

[Click here for our SMSC Policy](#)

[Click here to find out more about British Values](#)

Rule of law relates to:

- students following laboratory rules for the safety of all
- understanding of the need to have speed limits (speed, force, change of momentum)
- alcohol, tobacco and illegal drugs
- Practical activities in science require students to engage in team work and show mutual respect for each other.

Democracy is taught through student debates in issues such as:

- where to place limestone quarries
- examining issues such as whether smoking and drinking should be made illegal
- Resilience and self-esteem are developed through students building independent learning skills, experiencing.

Safeguarding:

We promote the safeguarding and wellbeing of all children at all times throughout the curriculum. Our children are given opportunities to develop self-confidence and resilience; they are taught to challenge, question and make informed choices; and are given skills to

resolve conflicts. Should any pupil make a disclosure, all staff are aware of the safeguarding policy and follow our safeguarding procedure.

[Click here for our Safeguarding Policy](#)

Out of school learning:

Each year we provide all KS2 children with the chance to spend a night in the Peak District with their classmates and teachers. The 'outdoor classroom' provides a meaningful way to engage learners in practical science, giving them experience of collecting and analysing data, and making predictions in the real world, beyond the limitations of the classroom . The wider educational benefits of teaching and learning science through fieldwork in the natural and built environments include teamwork, motivation and its potential to influence positively the choice of science as a future subject of study

There are many other visit organised to link with the science topic been taught throughout the school.

Resources:

The majority of resources will be stored centrally in the Science Area and updated when necessary by the Science Subject Leader. Safety issues will be addressed when sorting and working with practical apparatus. A full audit of the resources is to be carried out by the Science Subject Leader and any damaged equipment or requested resources will be costed.

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