



Leominster Primary School

Science Policy

At Leominster Primary School, we believe science is important because it provides children with the opportunity to understand both themselves and the world around them and develop a sense of responsibility for the environment. It is increasingly important that children appreciate how scientific and technological developments are shaping the world today.

Science in the National Curriculum:

Science is taught through the National Curriculum for Science (DfEE 2013), which has 3 key areas to the programmes of study for Key Stages 1 and 2.

It states that *'A high- quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics.'*

(National Curriculum, pg 144 – DfEE 2013)

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.

Knowledge, Skills and Understanding:

Scientific knowledge will be developed from the National Curriculum Programmes of Study, which are:

- Biology
- Physics
- Chemistry

Within this, the teaching of science should develop the key skills of working scientifically, which are:

- Observing over time
- Pattern seeking
- Identifying, classifying and grouping
- Comparative and fair testing
- Research

Equality of opportunity:

The science scheme of work is taught to all children in the school. Work set is differentiated to accommodate the varying abilities within the classroom. It will challenge more able pupils and support those with special educational needs. The school operates a clear policy of opportunity for all regardless

of gender, colour, ability and any other possible discrimination. A positive image of science is promoted to both boys and girls.

Scheme of Work/ Planning:

Science is taught in line with the National Curriculum for Science (DfEE 2013). This has been planned to ensure a balanced coverage of the National Curriculum Programmes of Study for Key Stages 1 and 2, as well as the progression and continuity of knowledge and skills (with a focus on Working Scientifically. See Science scheme of work for further details).

Science will be planned on a unit by unit basis, in line with the school overview for the foundation curriculum, on an agreed format for each unit of work. Planning support is available for the Key Science teachers within each Year group. This is monitored by the subject coordinator and reviewed at the end of each unit by individual class teachers/ year groups.

When children's work is not recorded in their individual Science books, evidence could be recorded and annotated within a 'Class Science Book' or photographs could be saved to the school network.

Cross-curricular links:

Science offers a range of contexts for the development of literacy skills, mathematics, geography and thinking skills. ICT plays an important role in developing communication, data handling modelling skills. Children will use computers, cameras, digital microscopes and other software to aid investigation and research.

Assessment and Marking:

Children will be continually assessed within Science against each of the unit's Programmes of Study, through both written and verbal responses. Teachers are also encouraged to keep electronic evidence (photographic). Other work should be kept in science folders or science books. At the beginning of each unit of work, class teachers are encouraged to complete a 'Diagnostic' assessment- which will inform teachers of the children's prior understanding and also be used to guide future planning. At the end of each unit of work teachers are encouraged to complete an 'End of Unit' assessment, which will show the progression of Scientific Knowledge and Understanding. Scientific Knowledge and Understanding is monitored and tracked on class tracking sheets. Green will indicate 'secure' understanding; orange will indicate 'within' understanding; red will indicate 'entering' understanding; purple will indicate children demonstrating a 'greater' understanding of the key objective. Working scientifically will be continually assessed and tracked within Phases (Years 1 & 2, Years 3 & 4, and Years 5 & 6). This will be recorded and children will individually be tracked on 'Working Scientifically' tracking sheets, with a green colour if they have achieved the WS objective.

Marking within Science will indicate whether the objective has been met (LO met). If a **key question** is used instead, then tick if met. When the LO/key question has not been met marking will give guidance on how they might improve their scientific knowledge, skill or understanding. This could be through a question for the child to respond to verbally or written. Greater understanding is also developed through teachers' further questioning within marking. Teachers will mark S for work that has been supported. In KS2 teachers will pick up basic age appropriate punctuation errors or common spelling errors highlighting these in yellow. Pupils will correct these in green. Children should be encouraged to self-correct where possible. In KS1 teachers will correct spellings (no more than 3), with a focus on correcting key words relating to the topic or KS1 common exception words. Teachers should comment on presentation / handwriting. 'Class Science Books' could be used to provide some evidence of Working Scientifically.

Health and Safety:

In order to maintain stringent health and safety standards, the need for a Risk Assessment is to be considered for every lesson taught, and recorded onto planning sheets. It is necessary for a Risk Assessment to be completed for lessons where there is a risk to children from environmental, resource, chemical reactions, activity or other factors. These need to be submitted to the Headteacher prior to the lesson being delivered. The publication 'Be Safe' (4th edition, Association for Science Education) provides valuable additional guidance for staff as well as the CLEAPSS website.

Resources:

Science resources are stored centrally in a locked cupboard. There is a code for the cupboard known to all class teachers. Resources are available for access by all members of staff. All resources should be returned to this area when not in use.

Staff Development:

The science co-ordinator updates, informs and supports staff as necessary. Training opportunities for the whole staff are available through INSET, arranged in consultation with the science co-ordinator and professional development co-ordinator.

Monitoring and Evaluation:

The subject leader is involved in monitoring and evaluating how science is taught throughout the school and there is an on-going process of monitoring the delivery of science lessons

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| Staff Responsible | Mrs. Melanie Brookes & Mrs Jessica Harrison |
| Reviewed By: | Mrs Melanie Brookes |
| Date Policy reviewed | Autumn 2019 |
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