LETHBRIDGE PRIMARY SCHOOL

SCIENCE POLICY

At Lethbridge Primary School we provide memorable scientific experiences, through which the children will develop a greater understanding of the world around them through the disciplines of biology, chemistry and physics. The children are encouraged to make observations, collect evidence and undertake practical investigations. The children are encouraged to think for themselves and develop their own interests and curiosities and develop their knowledge and conceptual understanding of science.

AIMS:

- To equip children to use themselves as starting points for learning about science, and to build on their enthusiasm and their natural sense of wonder about the world.
- To develop the children's **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- To prepare our children with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.
- To develop, through practical work, the understanding of the **nature, processes and methods of science**. These include the skills of observation, prediction, investigation, interpretation, communication, questioning and hypothesizing, and increased use of precise measurement skills and ICT.
- To encourage and enable children to offer their own suggestions, and to be creative in their approach to science, and to gain enjoyment from their scientific work.
- To enable children to develop their skills of co-operation through working with others, and to encourage where possible, ways for children to explore science in forms which are relevant and meaningful to them.
- To teach scientific enquiry through contexts taken from the National Curriculum for science.
- To encourage children to collect relevant evidence and to question outcome and to persevere.
- To encourage children to treat the living and non-living environment with respect and sensitivity.
- To stress the need for personal and group safety by the correct usage and storage of resources.
- To enable children to appreciate that we do not always know the answers and results when carrying out scientific enquiry.

Teaching and Learning:

Science is a core subject of the National Curriculum and our children undertake some Science activities every week at both key stages. The work covered in Key Stage 1 builds on Early Years Foundation Stage (EYFS). In Early Years Foundation Stage the children work on developing their

knowledge, understanding and skills through play activities and direct teaching from which the children undertake planned tasks.

At Lethbridge Primary School we aim to link our science with our current topic enabling the children to have a rich, cross-curricular experience. To ensure coverage, science may also be taught in discrete lessons or in blocked periods. The experiences the pupils receive achieve a balance between gaining knowledge and learning and using skills. We encourage the children to ask, as well as answer, scientific questions. They have the opportunity to use a variety of data, such as statistics, graphs, pictures, and photographs and staff teach to visual, auditory and kinaesthetic learning styles.

We recognise that there are children of widely different scientific abilities in all classes and we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways by:

- setting common tasks which are open-ended and can have a variety of responses;
- setting tasks of increasing difficulty (we do not expect all children to complete all tasks);
- grouping children by ability in the room and setting different tasks for each ability group;
- providing resources of different complexity, matched to the ability of the child;
- where possible, using classroom assistants to support the work of individual children or groups of children.
- mixed ability groups in which pupils plan and work together but record their work separately.

In our school, we undertake to make science lessons practical, stimulating and relevant. We arrange complementary activities outside of the classroom such as trips, STEM week and visitors. Our science education draws upon everyday and first-hand experiences, calling on the expertise and skills of real scientists and engineers such as those offered by STEM ambassadors. At Lethbridge Primary School we believe it is important not to work in isolation. We build links with other primary and secondary schools, for example through resource sharing, team teaching projects and inter-school quizzes. We share our learning with parents and each other though events such as Science or STEM Week.

Planning:

The whole school overview for science provides a progressive long term plan. This ensures coverage and consistency of the science curriculum across KS1 and KS2. Medium term planning for science takes place in teams and is linked to the current topic. The school has bought in Tom Robson's scheme of work to assist with the planning and assessment of the new curriculum and is used alongside other schemes of work.

Assessment and Record Keeping:

Assessment for learning is continuous throughout the planning, teaching and learning cycle. However children are assessed termly in KS1 and KS2 using a variety of methods:-

- ❖ Observing children at work, individually, in pairs, in a group, and in classes.
- ❖ Questioning, talking and listening to children

- Considering work/materials / investigations produced by children together with discussion about this with them.

Children's progress in scientific enquiry skills is continually monitored and tracked throughout their time at Lethbridge Primary School. School Pupil Tracker is updated and used to monitor progress against Age Related Expectations in Science.

Monitoring and evaluation:

Science leaders systematically monitor the effectiveness of the provision and evaluate its impact on standards. Science leaders monitor planning, review samples of work and conduct pupil interviews. Colleagues are supported in the teaching of science and informed of current development in staff meetings.

Equal Opportunities:

At Lethbridge Primary School we are committed to providing all children with an equal entitlement to scientific activities and opportunities regardless of race, gender, culture or class.

Inclusion:

In school 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 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. Some children will require closer supervision and more adult support to allow them to progress, whilst more able children will be extended through differentiated activities. By being given enhancing and enriching activities, more able children will be able to progress to a higher level of knowledge and understanding appropriate to their abilities.

Health and Safety:

All staff should make themselves aware of the school health and safety policy. During planning teachers need to consider and minimise risks for all activities and systematically teach pupils to take responsibility for determining the risks to themselves and others. Where appropriate reminders will be given to children about potential hazards and care of the equipment they are using.

Any trips should have been planned with due regard to the school policy on taking children on outings.

Resources:

Science leaders audit and purchase new resources as needed. Resources for each topic and key stage are stored in the science and mathematics resource room, ensuring that all pupils have access to sufficient and appropriate resources to support their work and enhance their learning. Science topic boxes are available from the resources room. Additional resources can be borrowed from Commonweal School.

Reviewed September 2017
To be reviewed September 2019