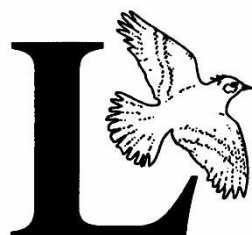


Larkrise Primary School



Science Policy

September 2023

Achieve Excellence**Intent**

At Larkrise, we value Science as a significant and valuable part of the children's entitlement to a broad and balanced curriculum. We believe that through high quality science teaching children will develop ideas and ways of working that enable them to make sense of the world in which they live through exploring and investigating real things. We want our children to develop a thirst for knowledge and an understanding, both of themselves and the environment. We encourage children to ask their own questions and think of ways in which these questions can be answered. Science is all around us and it is fundamental that children understand its role and importance in our everyday lives.

Aims

- Ask and answer scientific questions
- Make and test a variety of hypotheses
- Plan and carry out scientific investigations
- Build up understanding of basic scientific concepts
- Fostering the enjoyment and wonder of scientific discovery
- Understand the work and importance of significant scientists
- Develop their science capital (understanding of science in the world around us)
- Instilling a positive Health and Safety attitude
- To support and develop children's literacy, numeracy and ICT skills within a scientific concept.

Subject Content

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions

The programme of study content for Key Stage 1 includes:

- Everyday materials and their uses
- Animals including humans
- Living things and their habitats
- Plants
- Seasonal changes

Key stage 2

In Key Stage 2 children develop their scientific enquiry skills learnt in Key Stage 1 by:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

The programme of study contents includes:

- Plants
- Animals including humans
- Rocks
- Light
- Forces and magnets
- States of matter
- Electricity
- Earth and Spaces
- Evolution and inheritance
- Properties of materials

Implementation

Science is taught weekly for at least 1 hour as a stand alone lesson however teachers are encouraged to plan in where ever possible cross curricular links with other subject areas such as data handling in maths and investigation write ups in English.

When planning lessons teachers consider children's prior learning and what they will cover in the following years to ensure a cycle of lessons which carefully plans for progression and depth. Teachers use a range of different resources and schemes such as Ark curriculum plus to help plan engaging and stimulating lessons which are accessible for all learners.

Practical science learning and exploring what happens-when will be put in front of teacher-led whole-class sessions. Younger children develop their scientific enquiry skills by working together to find answers to questions using scientific methods and begin to record these. Older children will be encouraged to ask their own questions and use their scientific skills to find ways to then record their findings focusing them, recoding their findings focusing on What We Used (equipment), What We Did (method), fair testing, What We Found (results) and What This Proves (conclusion).

Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts when possible.

Differentiation and Progression

Differentiation is by outcome, visual aids, choice of materials, task and support.

Progression is ensured through the school's long term plan and monitoring of science/topic books by class teachers and the co-ordinator. Science planning follows the weaving document to ensure appropriate progression within the year.

Equality, Diversity and Inclusion

At Larkrise Primary School, care is taken to give each child the opportunity to learn about both the UK and global community, regardless of race, religion, language or gender. We value the diversity of individuals within our school and do not discriminate against children because of 'differences'. We believe that all our children matter and we value their families too. We give our children every opportunity to achieve their best by taking account of their range of life experiences when planning for their learning. The planning and organising of teaching strategies for each subject is consistently reviewed to ensure that no pupil is disadvantaged. This is in line with our Equality, and Diversity Inclusion Policy.

Special Needs Provision / Gifted and Talented

As an inclusive school we recognise the need to tailor our approach to support children with special educational needs as well as those who are identified as gifted and talented. Science lessons often take on the mastery approach to access a level of learning suitable for them.

Reporting

Reporting children's progress in science is reported to parents through the pupil annual report and the parent teacher consultation meetings. In Year 2 and Year 6 children will be formally assessed for science through the SATs and results recorded on target tracker and shared with parents at the end of the year.

Role of the Subject Leader

The coordinator's responsibilities are:

- To ensure a full range of relevant and effective resources are available to enhance and support learning.
- To ensure progression of the key knowledge and skills identified within each unit and that these are integral to the programme of study and secure at the end of each age phase.

- To monitor books and ensure that key knowledge is evidenced in outcomes, alongside and as supported, by SMT.
- To monitor planning and oversee the teaching of science.
- To lead further improvement in and development of the subject as informed by effective subject overview.
- To ensure that the art curriculum has a positive effect on all pupils, including those who are disadvantaged or have low attainment.
- To ensure that the art curriculum takes account of the school's context, promotes children's pride in the local area and provides access to positive role models from the local area to enhance the art curriculum.
- To ensure that approaches are informed by and in line with current identified good practice and pedagogy.

Resources

All science resources are kept in a science cupboard outside the Year 6 classroom. Resource boxes are labelled with the contents and it is the responsibility of all staff to keep this cupboard tidy and return any resources they have borrowed. The science co-ordinator will order any resources that need to be replaced.

Links with local community

Teachers are encouraged to take children out into the local area and community whenever possible as well as encouraging visitors from the community into school to enrich their learning and develop their science capital.

Health and safety

Safety in science in our school is of paramount importance. Staff are vigilant at all times and assess the risks involved in all activities to ensure that adequate precautions are taken. Pupils are made aware of any potential dangers.

Display

Every classroom is expected to have a science display and is possible books related to the topic which children have free access to. The display board is to act as a working wall for each unit of work showing progression of children's learning, key vocabulary for the unit and any thing else the class teacher feels important for the unit of work. Children's work can also be displayed on these boards.

Assessment and monitoring

Informal ongoing assessments are made by the class teacher during each lesson and notes are used to inform the following weeks lesson. Learning from the previous lesson is checked at the beginning of each lesson through a quiz. Double page spreads are completed at the end of each unit to help

teachers with formative assessment of the unit. Children working above and below are identified and noted down.

The science co-ordinator will monitor the standards of science across the school. This will include 'learning conversations' with staff, looking at planning, book looks, pupil voice and observations.

Impact

The impact of our science curriculum is measured through the following methods:

- A reflection on standards achieved against planned outcomes
- There is a clear progression of children's work
- Standards in science at the end of the key stages are good and issues arising are addressed effectively in school following analysis of group performance (girls and boys, PPG, etc)
- Children are becoming increasingly independent in science, selecting their own tools and materials, completing pupil lead investigations and choosing their own strategies for recording
- Tracking knowledge in pre- and post- learning quizzes;
- Children's work shows a range of topics and evidence of the curriculum coverage for all science topics.
- Pupil discussions about their learning
- Our SLT and governors are kept up to date with developments in the way science is run in our school with subject reports, action plans and review meetings.

Expiration of policy:

This policy will be reviewed and amended as required on a three yearly basis.