Science Strategy

LEIGHTON PRIMARY SCHOOL

SUBJECT LEAD	Emma Edwards
ADOPTED BY GOVERNORS	SUMMER 2023
REVIEW TIMETABLE	Annually
RENEWAL DATE	SPRING TERM 2025

1. Subject Rationale and Aims (Intent)

At Leighton Primary School,

Aims

- Engage children as learners at many levels through linking ideas with practical experience where possible.
- Help children to learn to question and discuss scientific issues that may affect their own lives.
- Help children develop, model and evaluate explanations through scientific methods of collecting evidence using critical and creative thought.
- Show children how major scientific ideas contribute to technological change and how these impacts on improving the quality of our everyday lives.
- To increase the child's knowledge and understanding of the world and their actions on the environment.
- To develop attitudes of curiosity, self-criticism and independence in thinking.
- To enable children to effectively and confidently communicate their scientific predictions and discoveries as they are given the opportunity to observe, describe, illustrate, hypothesise, evaluate and interpret, using appropriate scientific vocabulary.

2. Implementation

At Leighton Primary School,

Early Years and Foundation Stage

In EYFS, wherever possible the children are provided with activities based on firsthand experience that encourage exploration, observation, problem solving, prediction, critical thinking, decision making and discussion. We provide an environment with a wide range of indoor and outdoor experiences that stimulate their senses, interest and curiosity.
We guide children to explore the environment through natural materials. Children are exposed to new language and scientific concepts through fictional stories and talk.

Key Stage 1

Continuing into KS1 children are enriched in scientific vocabulary and concepts via fictional texts that help to give them a foundation of background knowledge. From this point, the children then observe, explore and ask questions about living things, materials and physical phenomena. They begin to work together to collect evidence to help them answer questions and to link this to simple scientific ideas. They begin to evaluate evidence and consider whether tests or comparisons are preparing for the future in a caring environment. The KS1 curriculum follows the National Curriculum, ensuring all areas of the Programme of Study are covered across both Years 1 and 2. Children further develop their understanding of the world around them which they have gained in the Foundation Stage

Key Stage 2

In KS2, we learn about a wider range of living things, materials and physical phenomena. They make links between ideas and explain things using simple models and theories. They apply their knowledge and understanding of scientific ideas to familiar phenomena, everyday things and their personal health. They think about the effects of scientific and technological developments on the environment and in other contexts. They carry out more systematic investigations, working on their own and with others. They talk about their work and its significance, using a wide range of scientific language, conventional diagrams, charts, graphs and ICT to communicate their ideas, embedding their statistical understanding.

3. Assessment in Science

Assessment is carried out in accordance with our assessment policy. On-going teacher assessment ensures that knowledge and skills are developed and progress made in the area of Science. Children complete an end of unit assessment each half term to help inform teacher judgement and assess overall understanding and knowledge. At the end of each unit, pupils from Y1-Y6 are then assessed against criteria in the progression of knowledge and skills document, as well as the end points identified on the curriculum map.

Pupils are assessed against the criteria of the curriculum using a 4 point scale. Those achieving above age-related expectations are assessed as a 4; those meeting age-related expectations as a 3; those approaching age-related expectations as a 2; and those well below age-related expectations as a 1. Formal assessments are recorded termly by teachers and reported to parents at the end of each year.

Year 4 and Year 6 undertake external science tests provided by GL assessments in the summer term. These are then externally marked and analysed. The results are used to support and inform teacher judgments for lower and upper Key Stage 2 as well as moderate the accuracy of our teacher judgements as a school.

The class teacher also evaluates each pupil by their verbal and practical understanding of scientific concepts and theory, within lessons.

4. Monitoring, Evaluation and Impact

At Leighton monitoring of the standards of children's work and of the quality of teaching in science is the responsibility of the science coordinator to ensure continuity and progression throughout the school. The role of science coordinator also involves being informed about current developments in the subject, and providing a strategic lead and direction for the subject in school. An annual summary of science is made in which strengths and weaknesses in the subject are evaluated, and an action plan to address any issues arising is formulated for the forthcoming year.