Orchard Community Primary School

Science Policy

This policy was approved by the Governing Body of Orchard Primary School at their meeting on……

Signed…… Chair of Governors

Version	Date	Author	Reason for Change
	05/03/19	TMc	Reviewed content

Review Frequency	Next Review Date
Every 3 years	

Rationale

At Orchard Primary School, science is both a body of knowledge and a methodology for understanding the world. Through experimental testing and explicit teaching of disciplinary knowledge, we aim to foster curiosity and critical thinking. Science equips children with the tools to ask meaningful questions and seek reliable answers, enabling them to:

- Think critically and effectively communicate their understanding.
- Apply scientific skills in diverse contexts across the curriculum.
- Develop inquiry skills that are valuable in science and other areas of learning.

Aims

Our science curriculum is designed to:

- Prepare children for life in an increasingly scientific and technological world.
- Foster concern and active care for local and global environments.
- Help children develop a scientific understanding of the world.
- Highlight the collaborative and international nature of science.
- Encourage appreciation of everyday and technological applications of science, considering both positive and negative impacts.

Attitudes

We aim to develop positive attitudes toward science by:

- Encouraging curiosity and a scientific approach to problem-solving.
- Fostering open-mindedness, self-assessment, perseverance, and responsibility.
- Promoting engagement in scientific inquiry by posing questions and conducting investigations.
- Developing social skills to enable cooperative learning and collaboration.
- Providing enjoyable, engaging experiences that nurture a lifelong interest in science.

Skills

Our science teaching focuses on:

- Building a solid understanding of scientific processes.
- Teaching practical scientific skills and investigative methods, including observation, questioning, measuring, predicting, hypothesizing, experimenting, and evaluating.
- Developing scientific language, recording techniques, and data presentation skills.
- Enabling effective communication of scientific ideas and findings.

Teaching and Learning

Planning:

Assessment-Informed: Planning starts with understanding children's needs through rigorous assessment and tracking, with high expectations for all.

Coverage: Medium-term plans outline the science topics to ensure alignment with the National Curriculum.

Success Criteria: Short-term plans include clear, differentiated success criteria tailored to individual readiness levels.

Adaptation: Objectives are adapted for children working significantly above or below the class standard. Scaffolding and extension tasks support personalised learning.

Real-Life Contexts: Lessons connect to real-world applications and creative curriculum topics to make learning purposeful.

Inquiry-Based Learning: Scientific inquiry drives knowledge acquisition, fostering independence and deeper understanding.

Cross-Curricular Integration: Opportunities to apply scientific skills across the curriculum are incorporated to reinforce learning in varied contexts.

Teaching:

- In the Foundation Stage, children are given the opportunity to learn about similarities and differences in relation to places, objects, materials and living things; to talk about the features of their own immediate environment and how environments might vary from one to another; make observations of animals and plants and explain why some things occur, and talk about changes
- Class and individual targets are used to address gaps and challenge learners appropriately.
- Lessons emphasise active participation, skill practice, knowledge acquisition, and application in diverse contexts.

Assessment:

Formative Assessment: Continuous assessment during lessons informs real-time adjustments.

Self-Assessment: Pupils evaluate their progress against learning objectives and success criteria.

Marking: Feedback follows the school's marking policy, addressing misconceptions and guiding improvements.

Future Planning: Teachers use assessments to refine lesson plans and address class needs.

Tracking Progress: Formative and summative assessments are aligned with Key Stage descriptors to monitor individual and group progress.

Resources

A well-stocked science cupboard provides easy access to materials, with consumable items available on request.

Partnerships with local industries, parents, and community resources enhance science learning through exhibitions, competitions, and events.

Responsibilities of the Subject Leader

The subject leader ensures high standards in science by:

- Monitoring teaching and learning through observations, work sampling, and feedback.

- Supporting teachers with planning and curriculum delivery.
- Updating whole-school planning and disseminating new information from network meetings.
- Managing resources and providing professional development opportunities.
- Reporting progress and outcomes to the Curriculum Committee as required.

Health and Safety

Children are taught the importance of health and safety during science activities. Teachers assess risks and ensure lessons are conducted safely with appropriate supervision. The CLEAPSS website is utilized for guidance on minimising risks.

By embedding these principles and practices, we aim to inspire a lifelong love of science and equip children with the skills and knowledge needed to thrive in a scientific world.