

THE FEDERATION OF NETTLESTONE & NEWCHURCH PRIMARY SCHOOLS



SCIENCE POLICY

Date Agreed: April 2021

Review Date: April 2023

Signed: _____
Co-Chair Board of Governors

Signed: _____
Executive Headteacher

The Federation of Nettlestone & Newchurch Primary Schools

Revision No.	Date Issued	Prepared By	Approved	Comments
1	September 2015	CW		Review of policy in light of the new curriculum
2	December 2017	CW		Minor changes
3	April 2019	CW/CS		New principles of science added.
4	April 2021			

All the governors and staff of The Federation of Nettlestone & Newchurch Primary Schools are committed to sharing a common objective to help keep the children and staff of the school community safe. We ensure that consistent effective safeguarding procedures are in place in order to support families, children and staff of the school.

1. Introduction

This document is a statement of the aims, principles and strategies for the teaching and learning of Science across the Federation of Nettlestone and Newchurch Primary Schools.

2. Rationale

Science stimulates children to consider the way in which things operate in the world around them. It aids the development of their understanding by encouraging children to raise questions and find answers through a discovery-based approach which involves prediction, practical exploration, experimentation and analysis. Children are encouraged to think creatively in order to develop their own means of enquiry and engage in thoughtful discussion concerning their findings and ideas. They are also provided with the opportunity to consider the practical application of scientific knowledge and recording strategies.

3. Principles

- See Principles of Science document in Appendix A.

4. Aims

Through the teaching of Science, we aim to:

- Prepare our children for life in an increasingly scientific and technological world.
- Foster concern about, and active care for, our environment.
- Support our children to acquire a growing understanding of scientific ideas.
- Help develop and extend our children's scientific concept of their world.
- Develop our children's understanding of the international and collaborative nature of science.

5. Attitudes

- i. Encourage the development of positive attitudes to science.
- ii. Build on our children's natural curiosity and developing a scientific approach to problems.
- iii. Encourage open-mindedness, self-assessment, perseverance and responsibility.
- iv. Build our children's self-confidence to enable them to work independently.
- v. Develop our children's social skills to work co-operatively with others.
- vi. Provide our children with an enjoyable experience of science, so that they will develop a deep and lasting interest and may be motivated to study science further.

6. Skills

- i. Give our children an understanding of scientific processes.
- ii. Help our children to acquire practical scientific skills.
- iii. Develop the skills of working scientifically - including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- iv. Develop the use of scientific language, recording and techniques.
- v. Develop the use of ICT in investigating and recording.
- vi. Enable our children to become effective communicators of scientific ideas, facts and data.

7. Strategies for the teaching and learning of Science

Teachers will follow the programmes of study from the National Curriculum.

The teaching method employed will vary according to the age, ability and experience of the children and the concepts being taught.

The Science curriculum can be integrated into COOL learning (KS1), topic work and links made to other subjects in order to enhance enjoyment and understanding by contextualising what is being learnt. Where it has not been possible to integrate Science within topics, it is taught as a discrete subject. Whether taught discretely or as part of COOL learning or topic work, Science will still be taught weekly.

In Reception, Science is taught in the context of 'Knowledge and Understanding of the World' which is part of the EYFS framework. Teachers in Reception and KS1 should be teaching the minimum equivalent of 1 hour of Science a week.

In Key stage 2, teachers should be teaching the minimum of 2 hours of Science a week.

A variety of teaching and learning styles are employed, including whole-class, group work, working in pairs or independently, according to the nature of the enquiry being pursued. The emphasis is placed on learning through first-hand experience, where possible. This should involve practical experiments, problem-solving and close

observation, based in real scientific enquires, including the use of the outside areas of the school and the local area.

Opportunities to undertake school trips are also provided, subject to risk assessments. These complement the learning that is taking place within the environment of the school. Children may also be encouraged to research knowledge, through various means, including books and the Internet, in order to enhance and aid their understanding of what is being learned.

Children are provided with the opportunity to engage in communicating and recording ideas and findings in a variety of ways, including the use of ICT. Ideas and findings may be presented in various ways including graphs, charts, drawings, photographs, diagrams, oral discussion and writing.

8. Attainment

By the end of each Key Stage, the pupils are expected to know, apply and understand the matters, skills and processes in the relevant National Curriculum programmes of study.

9. Health and Safety

Science is a potentially hazardous subject, and so health and safety is of utmost importance at all times. All teachers and helpers should ensure awareness of potential hazards and also of safety procedures. Lessons should be conducted in a disciplined manner. Children should be encouraged to handle equipment safely and appropriately. They should also be encouraged to take an active role in identifying and safeguarding against hazards as they progress throughout the school.

The School has a Health and Safety Policy, but additional guidance regarding good practice in relation to Science is available from www.cleapss.org.uk

Appendix A



The Federation of Nettlestone & Newchurch Primary Schools



Principles of Science

We know that good Science happens in our schools when:

- a) Children are encouraged to ask questions and investigate things for themselves.
- b) New learning builds on previous skills and knowledge from week to week.
- c) Lessons inspire the children and promote a natural curiosity about the world.
- d) Learning takes place in the classroom, the school grounds, within the local area as well as on school visits.
- e) The curriculum is enhanced through virtual experiences, e.g. virtual tours, video link-ups with experts.
- f) Children are encouraged to work together to share and discuss their ideas.
- g) Children use scientific vocabulary with increasing confidence.
- h) Science 'experts' are used to enrich the curriculum.
- i) Teachers use assessment tools to inform planning, and guide and extend children's thinking.

Children across the federation know good Science teaching is happening in our schools because:

- a) Our Science lessons are interesting, especially when we do practical experiments.
- b) We enjoy investigating, finding out new things and sharing our learning with our families.
- c) We work together to share and discuss our ideas.
- d) Lessons are not always in the classroom.
- e) When carrying out investigations, we know what equipment we can use and for what purpose.