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Science Policy

Record of Policy Amendment / History

Version/ Issue	Date	Author	Reason for Change
Version 1	September 2021	L.Redhead	
Version 2	January 2024	D.Hamilton	Curriculum review

Introduction

This policy sets out Elmsleigh Infant and Nursery School's aims and strategies for the successful delivery of Science. This policy should be read in conjunction with other relevant school policies.

The policy has been developed by the Science Lead (Ms Hamilton) in consultation with staff and is based on government recommended/statutory programmes of study. The implementation of this policy is the responsibility of all teaching staff. Science is a core subject within the National Curriculum and it is important that as a school we ensure it has the required depth and breadth to develop life-long learners that have a curiosity and genuine interest in Science.

Whole School Curriculum Intent

At Elmsleigh Infant School our intention is for every single child to have the knowledge, skills and purposeful experiences to provide them with the foundations to build a brighter future. We believe that by creating a magical, nurturing, safe and supportive learning environment we can enable our children to be responsible and respectful citizens who are ready for the next stage in achieving their dreams as independent learners.

Elmsleigh is on a mission to change lives every day - to ignite learning through passion, motivation and commitment to ensure that children reach their potential.

Right from the start, we want every child to become confident communicators in order to grow in becoming successful in all areas of the curriculum. Everything we believe in is underpinned through our clear and consistent approach to teaching phonics across the school.

Science Intent

We hope that through the teaching of Science that we are able to ensure the children are naturally interested in the world around them, and that they are equipped with the scientific knowledge required to understand the uses and implications of Science, today and for the future. Moreover, we aim to prepare our pupils for life in an increasingly scientific and technological world.

Science Implementation

At Elmsleigh Infant and Nursery School, we have implemented the Plymouth Science Scheme which follows the National Curriculum statements for Knowledge, Working Scientifically and Scientific Enquiry. It is a robust science curriculum that engages learners through practical, evidence-based pedagogy. Each unit is 6 weeks long and some units have a 6-week extension unit. It also uses the PSTT's (Primary Science Teaching Trust) enquiry skills symbols. Alongside the scheme, children are exposed to a range of scientific vocabulary and Pre learning (from previous year groups and lessons) tasks.

Reception	All about me x 3 lessons	Celebrations x 6 lessons	Traditional Tales x 3 lessons Colour x3 lessons	People who help us x 5 lessons	Animals x 3 lessons Under the Sea x 3 lessons	Materials x 4 lessons
Year 1	Seasonal Changes	Animals including humans	Animals including humans	Materials Lessons 1-6	Plants	Materials Ext 7-12
Year 2	Living things and habitats.	Materials	Animals including humans	Animals including humans (Ext Unit)	Plants	Plants (Ext Unit)

Science Curriculum Impact

Before our children leave Elmsleigh, we aim for them to leave year 2 with the Scientific knowledge and skills to ask questions, explore and be curious about the world around them.

We want them to have developed a curiosity as to how things work and how to think creatively to solve problems. We measure the impact of our curriculum in the following ways -

- Pupil and teacher discussions about their work and learning
- Continual assessment of the children's work
- Termly assessment using the progression of skills statements on Insight.
- Pupil progress is monitored and used to inform teaching, before being shared between year groups upon transition.
- Children's work is stored using Tapestry in EYFS and in their 'Understanding of the World' Folder
- Discussions with pupils by the subject leader in order to hear pupil voice.
- High quality displays in classrooms and around school.

Teaching and Learning

At Elmsleigh Infant and Nursey School, we firmly believe that children learn best through first-hand experiences, with this and with the high level quality of teaching delivered, we aim to foster and develop pupils' curiosity in the subject whilst also helping them to become inquisitive and investigative, learning lots of new knowledge and developing their understanding along the way.

We develop enquiry skills through scientific investigation. There are 7 science skills as set out by PSTT:

- asking questions
- making predictions
- setting up tests
- observing and measuring
- recording data
- interpreting and communicating results
- evaluating



These skills are acknowledged on planning and discussed with the children. The following are on display in every classroom:



At Elmsleigh Infant and Nursery school we ensure a high-level quality of teaching is delivered across the board, always incorporating a wide range of teaching and learning styles.

At Elmsleigh Infant and Nursery school we aim to:

- ❖ Learn about science, where possible, through first-hand practical experiences;
- ❖ Develop their research skills through the appropriate use of secondary sources;
- ❖ Work collaboratively in pairs, groups and/or individually;
- ❖ Plan and carry out investigations with an increasing systematic approach as they progress through the school;
- ❖ Develop their questioning, predicting, observing, measuring and interpreting skills;
- ❖ Record their work in a variety of ways e.g. writing, diagrams, graphs, tables;
- ❖ Read and spell scientific vocabulary appropriate for their age.
- ❖ Be motivated and inspired by engaging and interactive science displays which include key vocabulary and relevant questions.
- ❖ Learn about science using the outdoor learning environment.

Planning

- ❖ Science in the Early Years Foundation Stage is planned using the Early Years Curriculum 'Understanding of the World'.
- ❖ Key Stage 1 teachers plan science lessons using the new National Curriculum (2014).
- ❖ All science lessons have focussed learning objectives, clear differentiation and success criteria to ensure that pupils make at least good progress.
- ❖ 'Working scientifically' is embedded throughout the areas of learning in key stage 1 and 2; this focuses on the key aspects of scientific enquiry which enable pupils to investigate and answer scientific questions.
- ❖ Please refer to the long term plan for details of the specific areas of learning covered in each year group over the year.

Assessment

- ❖ At present key stage 1 use the 'Insight' scheme for summative assessments.
- ❖ In EYFS teachers assess science against the 'Development Matters' statements in the 'Understanding of the world' area of the Early Years Curriculum. The statements go from birth through to the Early Learning Goals at the end of Reception.
- ❖ For formative assessment teachers use effective Assessment for Learning (AfL) strategies which are used to inform their planning and teaching.
- ❖ Teachers provide quality feedback to pupils (verbal or written) which clearly identifies how they might need to improve.
- ❖ At present class teachers provide an annual teacher assessment result and pupils' progress is tracked against the National Curriculum levels for Key Stage 1.

Monitoring

- ❖ Planning and workbook scrutiny as well as pupil voice questionnaires are carried out by the science subject leader and feedback is given to teachers at an appropriate time and regular staff meetings will be carried out.

Health and safety

- ❖ Teachers must plan safe activities for science and complete a risk assessment if necessary.
- ❖ Teachers and teaching assistants need to be aware of health and safety procedures when using equipment/food in science lessons.

- ❖ Pupils must be aware of the need for personal safety and the safety of others during science lessons.

Resources

- ❖ Science resources are stored in the large cupboard next to doors in the hall, alongside the Design and Technology Resources.
- ❖ An inventory of resources is maintained by the Science lead.
- ❖ The subject leader must be informed of any changes regarding science resources i.e missing or broken resources and/or when new or replacement resources are required.

Inclusion

At Elmsleigh Infant and Nursery school we aim to ensure all pupils, no matter of their ability or their background, have the same opportunity to become Scientists and to develop their inquisitive minds and their natural investigative nature.

Our Enhanced Resource Unit (children on engagement model) follows the Early Years units from Plymouth Science and those children who access mainstream provision in the afternoon follow their year group's units. Teachers will use adapted resources, communication symbols and final unit quiz/challenges.

The Science Lead will:

- Ensure that the children at Elmsleigh Infant and Nursery school have every opportunity to learn Scientifically.
- Deliver staff meetings to update the staff of any Science updates and to ensure an up to-date and fresh attitude is paramount and evident with all staff.
- Ensure that the Science Scheme of work is up to date and runs parallel with any updates with the National Curriculum.
- Ensure that Science resources are organised and readily available to staff and are relevant with the National Curriculum.
- Encourage staff to share their good practice of planning on the Shared site and celebrate their fantastic ideas and techniques.
- Use external companies such as Science Workshops and visitors when appropriate.
- Participate in data analysis to explore gaps and identify next steps for bridging gaps.
- Monitor the coverage of science objectives are being taught linked to medium term planning.