

PALFREY INFANT SCHOOL SCIENCE SUBJECT POLICY

Lead Teacher: E.Ward



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Governing Body: 19.3.25

As a Rights Respecting School we believe:

Every child has to learn and have an education. Article 28 & 29

Every child has a right to be safe from harm and abuse. Article 19

Every child has a right of freedom of expression. Article 13

Every child has a right to be part of a community and practise his or her own religion and use his or her own language. Article 30

Every child has a right to rest and leisure. Article 31

Every child has a right to keep healthy. Article 24

We believe we fulfil these rights at Palfrey Infant School

1. Introduction

This policy reflects the aims and values of Palfrey Infant School. It ensures all stakeholders, including staff, governors, parents and pupils, are working towards the same goals.

The purpose of this policy is to:

- Set out a framework for all teaching and non-teaching staff, giving guidance on planning, teaching and assessment
- Demonstrate adherence to the EYFS Framework and National Curriculum programmes of study
- Provide clear information to parents and careers about what their children will be taught
- Allow the governing board to monitor the curriculum
- Provide Ofsted inspectors with evidence of curriculum planning and implementation

2. Intent

We intend to ensure our science scheme of work ensures that all children have access to a varied, progressive and well mapped out science curriculum that provides the opportunity for progression across the breadth of the science national curriculum. Working scientifically objectives are taught alongside the national curriculum content to ensure clear and focused coverage. We intend to reinforce key knowledge and scientific language as set out by the national curriculum and we want

our children to be confident learners who embrace opportunities to extend their learning and promote the independent desire for learning. We intend to inspire and enable children to be equipped to ask and answer scientific questions about the world around them

3. Aims

At Palfrey we understand the importance of raising pupils as lifelong learners and ensuring they receive a broad and balanced curriculum. Through science we aim to teach pupils the key scientific principles, subjects and values. We aim to give them a passion for learning and exploring enabling to question, experiment and analyse what they see and experience in order to develop a deeper understanding.

In line with Development Matters we aim to help children to:

- take pride in their learning and achievements.
- to reflect on their learning
- come up with their own ideas and explanations
- learn through discussion that goes beyond what they have noticed by asking why?, what might happen next? And how would you do that now?

In line with the national curriculum we aim to:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

4. Curriculum Overview

The science curriculum at Palfrey is delivered inline with the national curriculum learning objectives being met through teaching activities from Kapow and power points developed by teachers to ensure the coverage is tailored to our pupils.

The topics covered include seasonal changes, animals, materials and plants. These are inline with the National Curriculum and, in the EYFS these topics are covered through the Knowledge and understanding element of the EYFS framework.

4.1 Early Years

In the Early years, science is developed through the Understanding of the world element of the EYFS framework, some elements of the expressive arts and design as well as the communication and language area. Investigations, both guided and independent enable pupils to explore a range of scientific learning areas, from EYFS framework, with some elements from the National Curriculum also being explored. With talk being at the heart of pupils learning, a range of topics are explored where pupils express their understanding and share ideas with teachers expanding and monitoring misconceptions.

At the end of EYFS we expect children to:

- Understand some important process and changes to the natural world around them and changing states of matter.
- Understand some important processes and changes in the natural world around them including seasons and changing states of matter.
- Explore the natural world around them making observations and drawing pictures of animals (and plants)
- Describe why they see, hear and feel whilst outside
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their own experiences and what has been read in class.
- Explore the natural world around them making observations and drawing pictures of (animals and) plants
- Describe what they hear, see and feel when outside.

4.2 Key Stage 1

In Key stage 1 science is delivered once a week through an hour lesson where pupils use a range of learning styles and activities to explore seasonal changes, everyday materials, animals (including humans), habitats and plants. This learning is delivered through practical and recording activities aimed to inspire and excite the children. Talk and discussions are used to explore understanding, misconceptions and new ideas. Pupils support each other with their ideas and thoughts and often work together in pairs or small groups to complete the learning tasks. Teachers support pupils learning through open ended questioning and support a range of learning styles and levels.

At the end of Key Stage 1 we expect pupils to:

Living things:

- To begin to understand some of the life processes, including movement, reproduction, sensitivity, growth, excretion and nutrition
- To know the difference between things that are living, dead, and things that have never been alive, using some of the life processes.
- To name a variety of habitats, including woodland, ocean, rainforest and seashore.
- To know that a habitat is the environment where an animal or plant lives/ grows, because it provides what they need to survive.
- To know that a micro-habitat is a very small habitat
- To know that living things depend upon each other
- To understand that a food chain can be used to show how animals obtain food from eating either plants and/or other animals.
- To know a variety of plants and animals and describe some differences.
- To understand how living things change, and that animals have offspring that grow into adults.
- To know which offspring comes from which parent animal.
- To know the stages in some animal life cycles.
- To know that animals, including humans, need water, food and air to survive.
- To understand the importance of exercise, a balanced diet and hygiene for humans.

Materials:

- To know why objects are made from particular materials and to give examples of their suitability.
- To know that one material can be used for a range of purposes.
- To know that different materials can be used for the same purpose
- To know why certain materials are unsuitable for particular objects.

- To know that a force must be applied to change the shape of a solid object.
- To know that solid objects can be squashed, bent, twisted or stretched.
- To know that different solid objects may take a different amount of force to change shape

Plants:

- To know that seeds and bulbs grow into seedlings by producing roots and shoots.
- To know that seedlings grow into mature plants by developing parts, that may include stems/trunks, leaves, flowers and fruits.
- To know that seeds need water to germinate.
- To know that plants need water, light and a suitable temperature for growth and health.

4.3 Programmes of study

	Autumn	Spring	Summer
Nursery	Development matters	Development Matters	Development matters
Reception	Development matters (elements from NC)	Development matters (elements from NC)	Development matters (elements from NC)
Year 1	National Curriculum	National Curriculum	National Curriculum
Year 2	National Curriculum	National Curriculum	National Curriculum

5. Assessment and Recording

Formative assessment opportunities are used by teachers to evaluate progress and inform planning. In EYFS all children are regularly assessed against the objectives from Development Matters and the EYFS Framework as appropriate, on insight.

Across Key Stage 1, insight is used to monitor pupils progress and development in the different areas of learning. This is carried out regularly by class teachers and monitored by senior and subject leaders periodically through the year.

6. Resources

Science at Palfrey uses a range of practical resources to deliver lessons, support understanding and engage pupils in learning activities. Teachers use a range of experiences from cooking to making in order to show learning principles in action. Visitors include an animal service where pupils can get hands on experiences with a variety of animals putting classroom learning into reality and seeing lifecycles in real life with butterflies and chickens.

7. Inclusion

At Palfrey Infant School, we strive to create an inclusive teaching environment that offers all pupils, no matter their needs and abilities, a broad, balanced and challenging curriculum. We are committed to offering all pupils the chance to thrive and fulfil their aspirations. We will achieve this by making reasonable adjustments to teaching, the curriculum and the school environment to make sure that pupils with SEND are included in all aspects of school life.

Teachers set high expectations for all pupils in science. They will use appropriate assessment to set ambitious expectations and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with special educational needs and/or disabilities (SEND)

➤ Pupils with English as an additional language (EAL)

Teachers will plan lessons so pupils with SEN and/or disabilities can study science wherever possible, and ensure that there are no barriers to every pupil achieving.

Teachers will also take account of the needs of pupils whose first language is not English. Lessons will be planned so that teaching opportunities help pupils to develop their English, and to support pupils to take part in science.

Further information can be found in our statement of equality information and objectives, and in our SEN policy and information report.

8. Roles and Responsibilities

HEAD TEACHER

- Support the subject lead but also hold them to account for the effectiveness of the subject
- Monitoring the implementation of the science Policy and its associated policies.
- Ratifying (in conjunction with the Governing Body) the science policy and science Leader's Action Plan.
- Support staff through the provision of CPD and training which is in line with the whole school's strategic plan.
- Approving budget bids and setting them.
- Monitor the planning and delivery of the subject
- Ensure the requirements of the National Curriculum are met
- Ensure this policy is reviewed according to the timescales set out

SCIENCE LEADER

- Prepare and review subject policy and curriculum plans
- Raising the profile of science for all stakeholders.
- Monitoring the standards of science and feeding back to staff in a timely fashion so they can act on areas for development
- Ensuring assessment systems are in place
- Reporting on subject at specific times of the year to the Governing Body/Head/Staff
- Auditing the needs of the staff in terms of training/CPD and actively supporting staff with their day-to-day practice
- Stay informed regarding developments in the study and teaching of the subject
- Creating subject action plans and supporting a long-term vision which feeds into the whole school development plan
- Creating bids for the annual budgets and monitoring budget spend
- Keeping an up-to-date log of all resources available to staff
- Procuring physical and online resources that demonstrate best value

LINK GOVERNOR

- Monitor the impact of the subject across the school and on pupils
- Monitor teacher workload and professional development
- Ensure subject action plans are suitable
- Monitor the quality of resources
- Keep track of pupil and parent engagement with the subject
- Keep up to date with the curriculum (what's taught, why it's taught, and how it's taught)

CLASSROOM TEACHER

- Teach and assess the subject according to the principles laid out in this policy
- Report to the subject leader
- Maintain subject knowledge and appropriate CPD

PARENTS

- Make sure their children are prepared for learning
- Monitor completion of homework

9. Links to other policies

This subject policy links to the following policies and procedures:

- Teaching and Learning Policy
- Special Educational Needs and Disabilities (SEND) Policy
- Assessment and Data Policy
- Curriculum Design Philosophy
- EYFS Policy
- Feedback and Marking Policy

10. Monitoring and review

This policy will be reviewed by staff and governors every 3 years.