and

Abbots Farm Preschool

Science Policy

May 2025

Review by May 2027

Contents:

Statement of Intent

Our aim is to stimulate the children's natural curiosity, giving them opportunities to explore their ideas with others to help make sense of the world around them.

In Early Years and Key Stage 1, we believe science learning should take place actively. Our science lessons are rooted in our Talk for Learning ethos, allowing children the chance to explore and develop their own ideas with their peers in a supportive environment. The children are given opportunity to develop their own investigations based on these ideas and ideas given by the teacher.

Curiosity is a crucial part of what makes science engaging for children and most of our science topics will begin with a book to ignite that spark. The use of accurate scientific vocabulary is extremely important as the children's learning needs to provide a sturdy framework for scientific investigation through the rest of their education and beyond.

To this end, we aim to:

- Develop pupils' interest in, and enjoyment of, science by building on children's curiosity, to instil a positive attitude towards science in pupils.
- Deliver all the requirements of the national curriculum in relation to science and covering major scientific concepts.
- Ensure science lessons are purposeful, accurate and imaginative.
- Ensure pupils have sufficient scientific knowledge to understand both the uses and implications of science, today and in the future. This will also give pupils an appreciation of the changing nature of scientific knowledge.
- Develop the pupils' ability to pose questions, investigate these using correct techniques, accurately record their findings using appropriate scientific language and reflect on their results.
- Help pupils develop the skills of prediction, hypothesis, experimentation, investigation, observation, measurement, interpretation and communication.
- Making pupils aware of and alert to links between science and other school subjects, as well as their lives more generally.

1. Legal framework

This policy has due regard to all relevant legislation and statutory guidance including, but not limited to, the following:

- The Control of Substances Hazardous to Health Regulations (COSHH) 2002
- The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013
- DfE (2013) 'Science programmes of study: key stages 1 and 2'
- DfE (2025) 'Statutory framework for the early years foundation stage'

This policy operates in conjunction with the following school policies:

- Health and Safety Policy
- Teaching and Learning Policy
- Assessment Policy

2. Roles and responsibilities

The **governing body** is responsible for:

- Ensuring a broad and balanced science curriculum is implemented in the school.
- Ensuring the school's science curriculum is accessible to all children.

The **headteacher** is responsible for:

- The overall implementation of this policy.
- Ensuring the school's science curriculum is implemented consistently.
- Ensuring appropriate resources are allocated to the science curriculum.
- Ensuring all children are appropriately supported.
- Appointing a member of staff to lead on the school's approach to teaching science.

The **subject leader** is responsible for:

- Preparing policy documents and supporting with curriculum plans and schemes of work for the subject.
- Reviewing changes to the national curriculum and advising on their implementation.
- Monitoring the learning and teaching of science, providing support for staff where necessary.
- Encouraging staff to provide effective learning opportunities for children.
- Helping to develop colleagues' expertise in the subject.
- Organising the deployment of resources and carrying out an annual audit of all science resources.
- Liaising with teachers across all phases.
- Communicating developments in the subject to all teaching staff.
- Leading staff meetings and providing staff members with the appropriate training.
- Organising, providing and monitoring CPD opportunities in the subject.
- Ensuring common standards are met for recording and assessment.
- Advising on the contribution of science to other curriculum areas, including cross-curricular and extra-curricular activities.
- Collating assessment data and setting new priorities for development of science in subsequent years.

The **classroom teacher** is responsible for:

- Acting in accordance with Abbot's Farm Infant School Science Policy, ensuring that lessons are taught in line with the school's Health and Safety Policy at all times.
- Liaising with the science subject leader about key topics, resources and supporting individual children.
- Ensuring that all of the relevant statutory content is covered within the school year.

- Monitoring the progress of pupils in their class and reporting this on an annual basis.
- Reporting any concerns regarding the teaching of the subject to the subject leader or a member of the senior leadership team (SLT).
- Undertaking any training that is necessary in order to effectively teach the subject.

3. The National Curriculum

The national curriculum will be followed for all science teaching.

During Reception, in accordance with the 'Statutory framework for the early years foundation stage', focus will be put on the seven early learning goals (ELGs), with the scientific aspect of pupils' work relating to the objectives set out within the framework. The ELGs cover:

1. Communication and language: listening, attention and understanding; and speaking.
2. Personal, social and emotional development: self-regulation, managing self, and building relationships.
3. Physical development: gross motor skills and fine motor skills.
4. Literacy: comprehension, word reading, and writing.
5. Mathematics: number and numerical patterns.
6. Understanding the world: past and present; people, culture and communities; and the natural world.
7. Expressive arts and design: creating with materials; and being imaginative and expressive.

During Years 1 and 2, pupils will be taught to:

Working scientifically

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help in answering questions.

Year 1 pupils will also be taught to:

Plants

- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- Identify and describe the basic structure of a variety of common flowering plants, including trees.

Animals, including humans

- Identify and name a variety of common animals, including fish, amphibians, reptiles, birds and mammals.
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- Describe and compare the structure of a variety of common animals, i.e. fish, amphibians, reptiles, birds and mammals, including pets.
- Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

Everyday materials

- Distinguish between an object and the material from which it is made.

- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.
- Describe the simple physical properties of a variety of everyday materials.
- Compare and group together a variety of everyday materials on the basis of their simple physical properties.

Seasonal changes

- Observe changes across the four seasons.
- Observe and describe weather associated with the seasons and how day length varies.

Year 2 pupils will also be taught to:

Living things and their habitats

- Explore and compare the differences between things that are living, dead, and things that have never been alive.
- Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
- Identify and name a variety of plants and animals in their habitats, including microhabitats.
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

Plants

- Observe and describe how seeds and bulbs grow into mature plants.
- Find out and describe how plants need water, light and a suitable temperature to grow
- and stay healthy.

Animals, including humans

- Notice that animals, including humans, have offspring which grow into adults.
- Find out about and describe the basic needs of animals, including humans, for survival, i.e. water, food and air.
- Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

Uses of everyday materials

- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard, for particular uses.
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

4. Cross-curricular links

Wherever possible, the science curriculum will provide opportunities to establish links with other curriculum areas.

English

- Children are encouraged to use their speaking and listening skills to describe what is happening.
- Children's' writing skills are developed through recording their planning, what they observe and what they found out.
- Science based texts are sometimes used in English lessons and in guided reading sessions.

Maths

- Science will involve a degree of numeracy at all levels.
- Pupils use their knowledge and understanding of measurement and data handling.
- Where appropriate, pupils record their findings using charts, tables and graphs.

Computing

- Children will use ICT to locate and research information.
- Children will be used to record findings, using text, data and tables.
- Children are encouraged to use a variety of electrical devices, gaining confidence throughout their school experience.

PSHE

Health education is taught as part of the science units about humans, including information about healthy lifestyles, growth, age, and reproduction.

History

Scientific discoveries and the contribution of individuals to science will be studied.

British Values

- Children's development will be focussed on the vastness of science and the natural world, encouraging a sense of awe.
- Children are encouraged to think about the effect of scientific discoveries on the modern world.
- Current scientific developments and issues will be discussed in the classroom, where appropriate.

5. Teaching and assessment

Lesson planning

All relevant staff are briefed on the school's lesson planning procedures as part of staff training. Planning is carried out as a year group team.

Throughout the school, science is taught as a discrete inputs, continuous provision and as part of cross-curricular teaching when appropriate. The statutory national curriculum content from the DfE's 'Science programmes of study: key stages 1', as outlined above, as the starting point for their planning.

Lesson plans will balance visual, auditory and kinaesthetic elements used in teaching, ensuring that all pupils with different learning styles can access the learning experience. All lessons will have clear learning intentions, which are shared and reviewed with children.

Long-term planning will be used to outline the programmes of study to be taught within each year group. Medium-term planning will be used to outline the vocabulary and skills that will be taught in each unit of work, identifying learning intentions and suggested learning activities. Short-term planning will be used flexibly to reflect the intention of the lesson, the success criteria, differentiation, assessment opportunities and the aim of the next lesson, building on medium-term planning and taking into account children's' needs.

Teaching

Children will be taught to describe associated processes and key characteristics in common language, as well as understand and use technical terminology and specialist vocabulary. Lessons and continuous provision will allow for a wide range of scientific enquiry, including the following:

- Questioning, predicting and interpreting
- Pattern seeking
- Practical experiences
- Collaborative work

- Carrying out investigations
- Classifying and grouping
- Undertaking fair testing
- Researching using secondary sources

Opportunities for outdoor learning will be provided where possible.

Assessment

Children will be assessed and their progression recorded in line with the school's Assessment Policy. Assessment in science will be based upon scientific knowledge, sklils and understanding.

Children will be assessed continually throughout the year at the end of each unit and an assessment table completed. This will enable teachers to identify children's' understanding of topics and inform their future lesson planning. All assessments will be passed to relevant members of staff, such as the child's next class teacher.

Assessment will take various forms, including the following:

- Talking to children and asking questions
- Discussing children's' work with them
- Marking work against learning intentions
- Observing practical tasks and activities

Parents will be provided with a written report about their child's progress during the Summer term every year. Verbal reports will be provided at parent-teacher meetings during the Autumn and Spring terms.

6. Equipment and resources

Science resources for each unit are stored in the Science cupboard in the EYFS corridor.

The science lead is responsible for ensuring that all resources and equipment are sufficiently maintained, and for maintaining an inventory of resources. The science lead will carry out an annual audit of the science resources, reordering any consumables when necessary. Any equipment or resources which are a cause of concern will be removed from Science cupboard immediately.

Equipment will be checked by the class teacher prior to each use, and any damages or defects will be reported to the science lead immediately. Staff will also inform the science lead of any changes regarding science resources, such as when supplies of resources have run out or new resources are required. The science lead is responsible for negotiating requests from staff and ensuring resources are bought within the amount allocated in the annual budget.

7. Health and safety

Staff will act in accordance with the school's Health and Safety Policy at all times.

If needed a risk assessment will be carried out by teachers before science-related activities, e.g. conducting an experiment or undertaking practical activities, which are higher risk.

All children will be shown how to correctly use equipment prior to use and will be monitored by staff whilst using equipment. Children will also be made aware of how they are expected to behave, ensuring that they show respect to other people and the environment, and the personal safety protocols and protective equipment needed when using equipment or carrying out tasks, e.g. goggles.

At the beginning of any experiment, the teacher will outline the purpose of the experiment to the class, and all hazards and safety precautions will be thoroughly outlined. Any experiments or activities not previously conducted by the teacher will be trialled prior to being undertaken with children.

Accidents and near-misses will be reported following the school's reporting procedures.

8. Equal opportunities

All children will be given equal access to the entire science curriculum, including practical experiments.

Where required, children with SEND will be provided with additional support in order to fully engage with the science curriculum.

Where it is inappropriate for a child to participate in a specific lesson because of reasons related to any protected characteristics, the lesson will be adapted to meet the child's needs and alternative arrangements involving extra support will be provided where necessary.

The school aims to provide more academically able children with the opportunity to extend their scientific thinking through extension activities in continuous provision such as problem solving, investigative work and scientific research.

9. Monitoring and review

This policy will be reviewed every **two years** by the **science lead**, in collaboration with the **headteacher** unless there have been significant changes. The next scheduled review for this policy is **May 27.**

Any changes made to this policy will be communicated to science teachers and other relevant staff.