Buttsbury Infant School

Together we grow

Aspiration, Respect, Resilience, Kindness

Document Code:	**E14**
Document Name:	**Science Policy**
Document Grade:	**Recommended**
Date reviewed:	**February 2024**
Document Leader:	**Subject Leader**

E14 Science Policy

Date policy was agreed	March 2024
Policy review date	March 2027
Signed	Ann Robinson Executive Headteacher

Purpose of Study

A high-quality science education provides the foundations for understanding the world. Science has changed our lives and is vital to the world's future prosperity, and all children should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, children should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Aims of Music

The National Curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through different aspects of science
- 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

Curriculum Intent

At Buttsbury Infant School the intent of our science curriculum is to encourage children to be knowledgeable and inquisitive about the world around them. We aim to develop their curiosity and observational skills through scientific tasks including practical scientific enquiry, talking about what they can see and what is happening using scientific vocabulary, recording their observations, applying their learning to the 'real world' and building upon previous learning.

Curriculum Implementation

We have a broad and balanced science curriculum at Buttsbury Infant School where children are given rich, vibrant and meaningful opportunities, both inside and outside of the classroom, within a curriculum that is ambitious for all learners.

Units of learning are blocked, well sequenced and build on previous learning. Lessons ensure that progress is achieved through small steps, allowing children to develop their subject knowledge, consolidate skills and apply their learning. Strands in science include: EYFS – Understanding the World, Working Scientifically, Animals including Humans, Everyday Materials, Properties and Change of Materials, Plants, Weather and Seasonal Changes, Living Things and their Habitats.

At Buttsbury Infant school, science lessons may include:

- Using scientific enquiry to provide opportunities to discuss, observe, record, predict and summarise.
- A range of opportunities to understand and develop scientific concepts and skills.
- Opportunities to communicate scientifically using accurate vocabulary.
- Opportunities to think about and consider how science affects our everyday life and the impact of famous scientists on our world.
- Indoor and outdoor learning, including visits or visitors to the school.

Curriculum Impact

Our curriculum encourages children to be inquisitive, curious and enthusiastic about the world around them. By learning about the wider world, children will have a greater scientific understanding of the world they live in.

As a result of our science curriculum, children are equipped with the necessary knowledge and skills for the next stage of their education at junior school.

Early Years Foundation Stage (EYFS)

During the Early Years Foundation Stage, young children are given opportunities to develop their scientific skills within the Early Learning Goals for Understanding the World. Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding in science.

Science in relation to the National Curriculum

The curriculum is organised to ensure that children's experience of science is developed through activities that bring together requirements from the Key Stage 1 programme of study (working scientifically, plants, animals including humans, everyday materials, seasonal changes, living things and their habitats, plants, use of everyday materials)

Children are taught to:

- 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 them to answer questions
- 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
- 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 (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
- 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
- observe changes across the 4 seasons
- observe and describe weather associated with the seasons and how day length varies
- 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
- 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
- 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 (water, food and air)
- describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene
- 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

Planning of Science

Science planning is based on the National Curriculum, our own bespoke scheme and the Kapow scheme of work.

Relationships with other subjects

Children are given opportunities, where appropriate, to develop and apply their science skills across a range of other curriculum areas.

Links with literacy:

Examples of scientific activities and tasks which support the development of *Literacy*:

- Listening skills: associated with class discussions and group work around planning investigations, learning new concepts and working with others to carry out investigations.
- Comprehension: reading non-fiction texts linked to the area of science being taught, applying this knowledge to answer questions to make predictions.
- Speaking: developing the ability to compose, ask and answer questions. Develop and articulate ideas based on their science investigations.
- Writing: recording information and data, reporting on investigations.

Links with maths:

Examples of science activities and tasks which support the development of *Maths:*

- Formulating and reading graphs and charts
- Calculating: working out times, temperatures, weighing objects during investigations
- Number knowledge – comparing amounts in different groups, comparing times

Inclusion:

- There will be opportunities in science for all children to both practise skills and extend their scientific knowledge and skills.
- The programme of study for EYFS and KS1 will be taught in ways appropriate to children's abilities.
- There will be equal access to materials.
- Participation in a wide variety of scientific activities will be encouraged.

Assessment and Recording

Recording children's scientific achievements and progress can be accomplished in a variety of ways:-

- Visual recordings – photographs, or iPads
- Sound and visual – videos or iPads
- and the written language – work recorded in books

Children's progress is measured against descriptions in the Early Learning Goals and the National Curriculum

Role of the Science Subject Leader

The science subject leader will:

- Monitor policy and teaching and learning in science.
- Provide assistance to all staff when requested, in order to implement the science policy consistently throughout the school.
- Organise resources to support the school science policy and teachings.
- Co-ordinate purchasing, organisation and distribution of resources.
- Arrange in-service support.
- Liaise with outside agencies, other schools and colleagues.