Brookfield Park Primary School

Nurture, include and inspire to succeed

Science Policy

Date September 2024

Policy will be reviewed September 2025

Brookfield Park Primary School **Ethos**

- Brookfield Park is a **'can do' school** where we make a difference to every child and help them to achieve
- Each child is unique. Each child brings different experiences, skills and ideas into the classroom. Each child has the capacity to grow, reach their potential and exceed it
- We enable each child to unleash their potential and prepare them for a future that can't even be imagined today
- We have the highest ambition and expectations for our pupils. Children here know that through hard work, application and good behaviour, anything is possible.
- We challenge, energise and inspire our pupils to have the highest aspirations for themselves
- We are proud to be a family school with a strong culture of kindness. Children are expected to show respect and kindness to everyone around them. We insist on good manners and high standards of behaviour at all times from everyone in our school community.

Brookfield Park Primary School **Vision**

When looking to the future, our vision is to ensure that Brookfield Park is increasingly regarded as:

- being the **number one** provider of nurture and wellbeing in our community
- being the school built on good behaviour, empathy and consideration for others
- being one of the best schools in our community for both academic achievement and life skills development
- being a school with a rich and broad curriculum tailored to meet the needs of every child
- being the school of choice and the thriving hub of the community

Brookfield Park Primary School **Mission Statement**

- The school will be an educationally inclusive school - one in which learning, achievements, attitudes, well-being and the happiness of all members of the school community matters.
- The school will provide a challenging, broad and exciting curriculum that extends into the world beyond the classroom, which will actively encourage, motivate and develop the talents of everyone in school.

- The school is committed to being a healthy and safe school. Everyone here recognises that investing in emotional, mental and physical health and providing a safe, secure environment is important. Through PSHRE, the school will support children in gaining the knowledge and skills required to keep themselves safe, healthy and happy, and thrive in their future.
- The school will ensure that all learning takes place within a collaborative, vibrant, stimulating and quality environment which meets the needs of our children.
- The school will build the qualities of citizenship, in which children will be given opportunities to take ownership and responsibility and be encouraged to make positive contributions to their own learning, the learning of others, the school and broader society.
- The school will help children develop self-confidence and resilience and therefore independence, to enable them to become life-long learners, who make good choices and decisions.

Curriculum Intent Statement

September 2022

We want our curriculum to offer the children:

- A chance to be curious about the world
- Access to a rich vocabulary to hear, say, write, understand
- Tools to develop a can-do attitude
- Time and space to try, fail, succeed
- Opportunity to see the bigger picture
- Chance to develop an innate love of learning
- Chance to take pride in themselves
- Understanding of the link between effort and reward
- Skills to communicate to a variety of audiences
- Opportunities which help them to see the benefit of collaboration
- Skills to be effective at self-evaluation
- Understanding about their impact and responsibility in the wider world

Science Statement of Intent

Why do we teach Science? Why do we teach Science in the way we do?

At Brookfield Park we want our children to be naturally curious about the world around them. We are committed to providing a stimulating, engaging and challenging learning environment and to foster a sense of wonder about natural phenomena. Our curriculum has been developed by all staff to ensure full coverage of the National Curriculum programmes of study, including the Early Years Foundation Stage Curriculum. Throughout school children will be encouraged to develop and use a range of working scientifically skills including questioning, researching and observing. We will also provide children with regular experience of the five types of enquiry skills.

We also want our children to have a broad vocabulary. Scientific language is to be taught and built upon as topics are revisited in different year groups and across key stages. We will ensure that children understand what science means, how it is relevant in the world and to know about famous scientists who have influenced our daily lives. We intend to provide all children with essential scientific knowledge and aim to secure the retention of this knowledge year on year.

Implementation

What do we teach? What does this look like?

At Brookfield Park we aim to create a positive attitude to science learning within our classrooms and uphold an expectation that all children are capable of achieving high standards in this subject. We plan our science curriculum directly from the National Curriculum programmes of study and the Early Years Foundation Stage statutory framework using PLAN assessment materials as one of the teaching tools, along with other useful resources such as Explorify. The Plan assessment documents provide the key knowledge and skills for each unit along with examples of lesson activities, but it is up to individual teachers to deliver the lesson using the best resources and strategies for their children at that time.

Early Years Foundation Stage have a separate long-term plan devised for early development and exploration. Children will observe, experience and talk about themselves, seasonal changes, materials, diet and healthy living, plants and animals. They will be encouraged to work scientifically by using their senses, looking closely and talking about what they notice including similarities and differences.

In Key Stages One and Two, children will be taught the knowledge and skills outlined in the National Curriculum. Teachers will follow a new carefully designed long-term plan which ensures progression and the cumulative acquisition of knowledge. All children will learn about famous scientists and their impact on the world. Children will be taught science as a discrete subject and there will be an expectation that they understand what science is all about. Teachers will deliver units in blocked formats ensuring adequate coverage each half term. Units are arranged to make optimum use of the natural environment at different times of the year.

Throughout the year, teachers will ensure that they provide children with a range of enquiry opportunities e.g.

- research
- pattern seeking
- observing over time
- identifying and classifying
- comparative and fair testing

We will also ensure that children work scientifically within these units for example by planning an enquiry, observing and measuring, recording, interpreting, reporting and evaluating. At the end of each unit taught, we will provide children with a low-stakes quiz and other informal assessment tools in order to assess retention of knowledge. This key 'sticky' knowledge will be regularly tested and aided by the use of knowledge organisers as a helpful resource.

How we plan and teach
The long-term plan for science outlines the units of work to be covered from years one to six. This is to ensure progression of knowledge without repetition. Medium term planning produced by the PLAN assessment website will be followed to ensure full coverage of year group learning intentions. Opportunities for scientific enquiry are also highlighted, using The Ogden Trust 'Working Scientifically' document and The Association for Science Education 'Planning Matrices'. Existing understanding will be checked by teachers prior to planning and teaching a unit. Teachers will talk about the subject of science and remind children of the subject before each lesson.

We will use a range of teaching styles and methods including questioning, explaining, scaffolding, demonstration and modelling. We provide for learning opportunities through group work, paired work, individual work and whole class teaching. To support the teaching and learning across the science curriculum, all members of staff and pupils have access to a wide range of interactive and explorative resources.

Key Vocabulary
All year groups are provided with key science vocabulary and 'sticky'/key knowledge organisers. These consist of words and ideas pertaining to each topic covered in that year group, plus generic scientific words. Children are expected to spell most of these correctly in the recording of their work. Some misspelt words are corrected by class teachers where appropriate.

Impact

What will it look like?

Children will understand the relevance of learning science and show a genuine enjoyment of the subject. There will be obvious progression in workbooks, both within and between year groups. We will ensure that there is evidence for each topic including evidence embedded within other subjects.

We intend to see a clear impact of science coverage for example using vocabulary correctly. Through photographs and work, there will also be evidence that children have selected from a range of scientific equipment and resources to perform practical tasks.

Feedback from teachers to children will be provided to have an impact on learning outcomes and not merely as a matter of course. Standards will be judged by informal low-stakes tests at the end of each unit and more formal assessments when required. The subject leader, alongside other staff will monitor progression on a regular basis. This will include book scrutinies, discussions with children and teachers, lesson observations and drop-in sessions. This will be done in partnership with the science subject governor where possible and all summaries and

In years six and two reporting of end of year levels will be in accordance the national reporting arrangements. Parents/carers are invited into school in the autumn and spring term to discuss the progress of their child.

Enrichment

Opportunities will be provided where possible to broaden and deepen children's knowledge and experience of science. These may include trips, visits by experts, workshops and clubs etc.

Learning Environment

At Brookfield Park Primary School, we aim to create a learning environment that provides the optimum conditions for learning. Every classroom is designed to feel welcoming and calm and wall displays are kept to a minimum to avoid over stimulation and to give more precedence to the work, vocabulary and images that are chosen to be displayed. When resources are chosen for a science lesson they are introduced with safety in mind and age appropriateness. The curriculum covers so many subjects that there is not an expectation to have every subject represented in the classroom. The larger school environment is currently undergoing a refresh and the walls in corridors are being turned into usable learning resources for the children in school, with many subject areas represented in different ways, building in opportunities to include vocabulary, key knowledge and thought provoking questions as part of each display.

SEND and Gifted

(See Special Educational Needs Policy and Gifted and Talented Policy)
All learners have access to the full National Curriculum for science. Class teachers will provide differentiated learning opportunities to meet the needs of all pupils. Class teachers should identify pupils who are particularly able in science and learners will be provided with opportunities to further develop their skills and achievements.

Diversity and Cohesion

Brookfield Park is an inclusive school, working towards greater equality in the whole school community. We use the curriculum and teaching to enhance the self-esteem of all learners. When using images as part of a learning activity teachers are asked to take into account diversity of race and ethnicity to ensure all groups are equally and fairly represented if possible and teachers always consider how adjustments can be made to include all children in practical and theoretical science activities. Whenever relevant, teachers will try to discuss eminent scientist from other cultures, backgrounds and countries.