# Sutton Park Primary School

## Science

### Sutton Park Curriculum Drivers

**Aspiration** (so that our children always strive for success and aim high in all they do); **Communication** (so that our children can develop the language and skills necessary to communicate effectively); **Understanding** (so that our children understand where they came from, where they are going and to appreciate the diversity of different communities and individuals) and **Restorative Behaviours** (so that our children take responsibility for their actions and can build successful relationships).

### Curriculum Progression (including concepts)

We encourage our children to "think scientifically" by developing a growing understanding in the following areas of substantive knowledge:

*Animals including Humans
*Plants
*Electricity
*Light
*Evolution and Inheritance
*Earth and Space
*Living Things and their habitats
*Materials
*Sound
*Forces
*Seasonal Change

This knowledge is developed by exploring these areas of science through the elements of disciplinary knowledge such as; observation over time; grouping, classifying and identifying; pattern seeking; research and fair and comparative testing.

*"By learning substantive and disciplinary knowledge, pupils not only know 'the science'; they also know the evidence for it."* Ofsted April 2021.

### Intent

Through our science curriculum at Sutton Park Primary School, we aim to develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.

The science curriculum is carefully planned to ensure that previous learning is built upon and the progression of disciplinary and substantive knowledge is continuous throughout the school. Our aim is for pupils to develop their understanding of the nature, processes and methods of science through different types of science enquiries that help pupils to answer scientific questions about the world around them.

Lessons actively engage pupils in their own learning through the development of essential scientific enquiry skills that deepen their scientific knowledge and understanding while nurturing an enthusiasm and enjoyment of scientific learning and discovery.

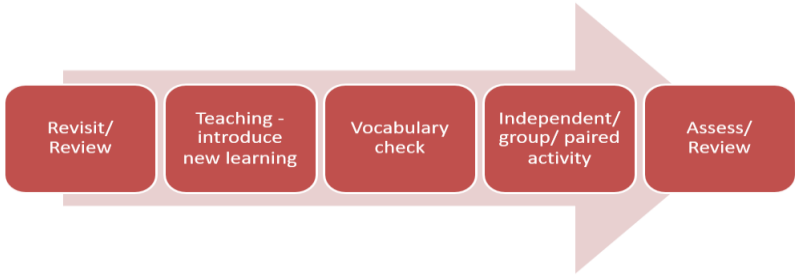
As pupils progress through the school, our science lessons aim to equip pupils with the scientific knowledge required to understand the uses and implications of science, today and for the future.

### EYFS at Sutton Park

Science is encompassed in the Understanding the World area of learning. The EYFS curriculum is mapped carefully to make links to the science curriculum throughout the year, as children are introduced to a wide range of experiences that allow them to explore the natural world around them. Children will be encouraged to be curious, yet appreciate and respect living things and their environment. They will investigate the concepts of growth, change and decay with natural materials, including planting seeds and caring for growing plants. Children will be given hands-on experiences that allow them to explore and talk about different forces they can feel and about the differences between materials and changes they notice – including the concepts of sinking and floating, shadows, magnetism. Throughout their learning, new vocabulary related to their explorations will be introduced and the children encouraged to use it.

### Lesson Structure

Each session follows a clear structure supported by Rosenshine's Principles of Instruction (Review, Check for Understanding, Provide Models, Provide Scaffolds, Guide practice).




### Cultural Capital

Science capital is the accumulation of science knowledge, behaviours, and skills that a child can draw upon and which demonstrates their scientific awareness, knowledge and competence.

Through our science curriculum we build capital by providing opportunities to study people (scientists) who have had a major impact on our understanding of the world we live in, both past and present.

Pupils are encouraged to understand how science impacts on their lives and how they could influence the future of science through their future careers.

## Science Whole School Overview

| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|---|
| Year 1 | Seasonal Changes | Animals including Humans | Everyday Materials | | Plants | |
| Year 2 | Uses of Everyday Materials | | Plants | | Living Things and their Habitats | Animals Including Humans |
| Year 3 | Rocks | Forces and Magnets | Light | | Plants | Animals, including Humans |
| Year 4 | Living Things and their Habitats | Animals including Humans | Electricity | Sound | States of Matter | |
| Year 5 | Properties and Changes of Materials | | Forces | Earth and Space | Living Things and their Habitats | Animals including Humans |
| Year 6 | Animals including Humans | Living Things and their Habitats | Evolution and Inheritance | Light | Electricity | |

## Assessment

Children are assessed in science using the year group objectives devised from the National Curriculum. Teachers build a picture of pupils' capabilities throughout the year using formative assessment. At the end of the academic year, teachers meet the child's new teacher to discuss what gaps the children have in their progression through the science curriculum. At the start of each science unit, teachers review previous learning and aim to plug any gaps in their knowledge that may hinder the pupils' progress in the unit they are covering. Evidence of pupils meeting science curriculum objectives may be present in pupil's science books or may have been witnessed by the class teacher. Retrieval based learning techniques are used throughout the unit to ensure pupils remember more.

## Impact

Children are engaged within science lessons and curious to discover, learn and remember more.
Work is of a high quality, demonstrating how pupils are acquiring knowledge, skills and vocabulary in an appropriate sequence.

Pupils' work demonstrates that science is taught at an age-appropriate standard across each year group with opportunities planned in to engage all pupils.
Children are able to 'Think like a Scientist' including a growing understanding of substantive and disciplinary knowledge.
Learners are becoming more articulate when communicating scientifically.
As Scientists, children learn lessons from science that will influence the decisions they make in their own lives and the journey they will take.

## Key Scientific Sequence of Learning