Southglade Primary & Nursery School

Science Policy

Autumn 2025

Our vision statement

At Southglade Primary and Nursery School, our vision is to provide a science curriculum that enables pupils to explore and discover the world around them, so that they have a deeper understanding of the world we live in.

Young children are naturally curious and passionate about how and why things happen. At Southglade we provide a stimulating science curriculum that nurtures children's natural curiosity and their on-going intellectual development.

We aim to inspire our children by giving them the opportunities to pursue their natural curiosity; promoting the experience of exploring and investigating scientific phenomena, in a range of contexts, to ensure a continually evolving knowledge and understanding of the world around them. Our children will be encouraged to ask questions, take risks, experiment, reflect, make and learn from mistakes, in a safe environment; whereby they acquire and apply core skills which equip them for an ever-changing world.

This policy sets out a framework within which teaching and non-teaching staff can work, and give guidance on planning, teaching and assessment.

Aims

In line with the National Curriculum for Science, at Southglade Primary School we aim to ensure that all pupils:

- 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.

We aim to achieve this through teaching an engaging and stimulating science curriculum that encourages children to be inquisitive, ask questions and investigate outcomes independently.

The Science Curriculum

Early Years

Science in the Early Years setting is covered in the 'Understanding the World' area of the newly-introduced EYFS framework. It is introduced indirectly through activities that encourage children to explore, problem solve, observe, predict, think, make decisions and talk about the world around them. Children will explore creatures, people, plants and objects in their natural environments. They will observe and manipulate objects and materials to identify differences and similarities. They will also learn to use their senses and explain why some things occur, talking about changes they observe. Children will be encouraged to ask questions about why things happen and how things work and explain what they think might happen. Children will learn basic skills and be encouraged to be curious about the world around them so they are prepared and enthusiastic about science when they reach Key Stage One.

Key Stage One

The principal focus of science teaching in key stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos.

Pupils should read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at Key Stage One.

Pupils should be taught about:

- *Plants*
- *Animals including humans*
- *Everyday materials and their uses*
- *Seasonal changes*
- *Living things and their habitats*

Lower Key Stage Two

The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information.

They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge.

Pupils should be taught about:

- *Plants*
- *Rocks*
- *Light*
- *Forces and magnets*
- *Living things and their habitats*
- *Animals including humans*
- *States of matter*
- *Sound*
- *Electricity*

Upper Key Stage Two

The principal focus of science teaching in upper key stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At upper key stage 2, they should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. They should select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

Pupils should read, spell and pronounce scientific vocabulary correctly.

Pupils should be taught about:

- *Living things and their habitats*
- *Animals including humans*
- *Properties and changes of materials*
- *Earth and space*
- *Forces*
- *Evolution and inheritance*
- *Light*
- *Electricity*

Teaching and Learning

At Southglade Primary and Nursery School, we believe in giving all children the opportunity to achieve their potential in science. In order to facilitate this, science is taught using a range of teaching techniques and styles with a particular focus on 'Working Scientifically'.

'Working scientifically' specifies the understanding of the nature, processes and methods of science with expectations for each year group outlined in the progression ladders for science. It is not taught as a separate strand but is instead embedded within the content of the areas of science that are taught in each year group. Teaching is focused on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions. These types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions through collecting, analysing and presenting data.

Pupils first develop their knowledge in an area through theory based and practical activities. They are then are taught to, with support, apply their learning when answering scientific questions. Finally, pupils are expected to work independently, planning and investigating scientific concepts of increasing complexity.

Science planning

In the foundation stage, science is taught within the context of the Early Learning Framework. Across Key Stage One and Two, science is planned and taught for at least one hour per week. Areas of learning are planned in line with the Southglade Science curriculum with a significant focus on working scientifically

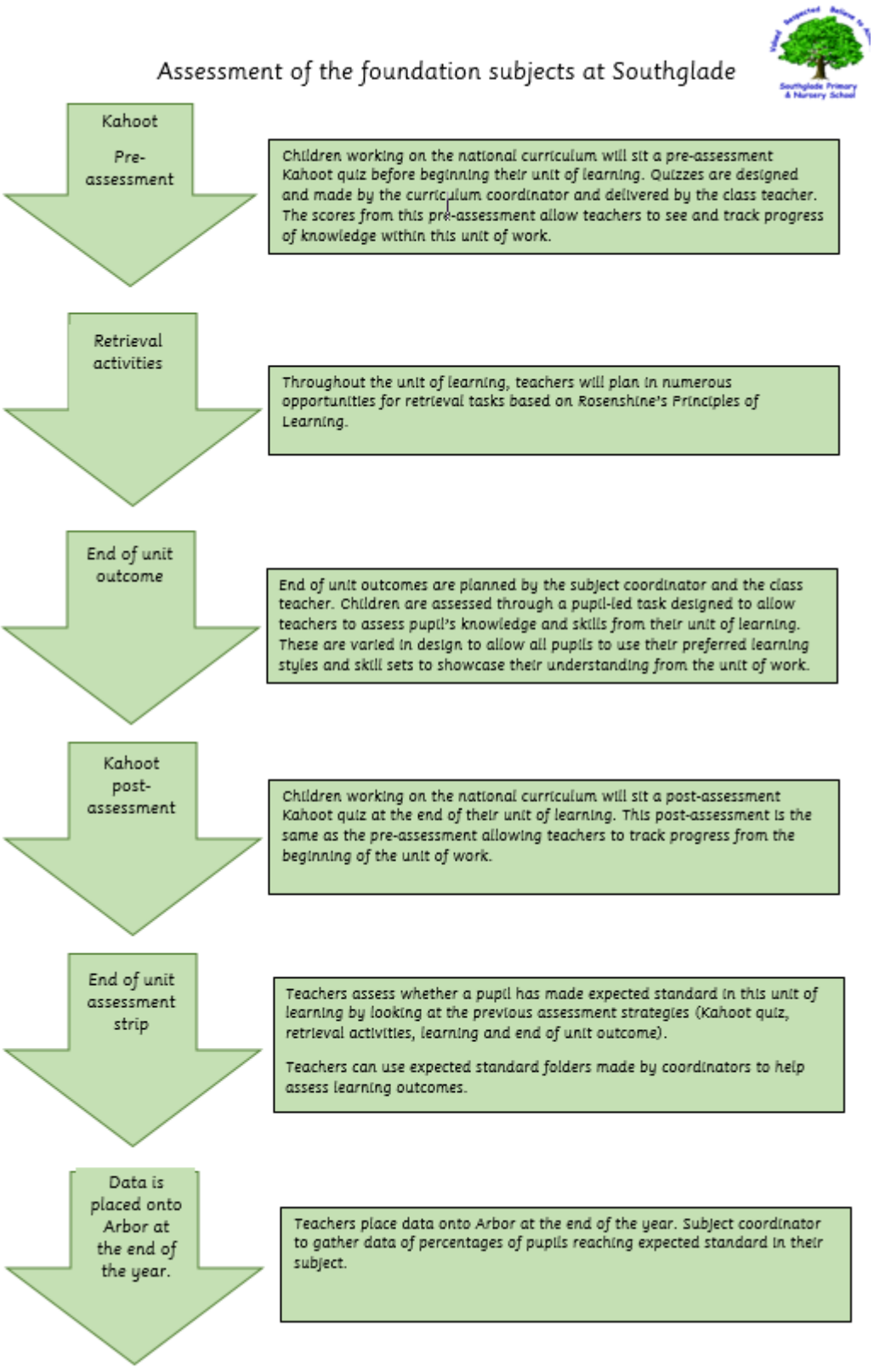
Science plans take the form of the long-term plan and medium term plan. The objectives from the medium-term plan and the progression ladders inform the sequencing of lessons and the creation of a set of Smart Notebooks.

When planning, skills progression ladders should be utilised to ensure work is suitably challenging. Key learning activities specified in the progression ladders should be included in sequences of learning and working scientifically objectives should be explicitly planned for. Science planning should be appropriately differentiated to allow all groups of learners to maximise their progress.

Progression

Skills progression ladders are used to ensure progression. There is a skills ladder for each strand of science taught in the National Curriculum, including Working Scientifically. They contain all requisite learning that is relevant to a particular strand, even if it was covered in alternative strand. These allow teachers to ensure they are building effectively on prior knowledge and skills when planning. Skills progression ladders ensure pupils are constantly challenged as they move up through school and that they are prepared to work more independently when planning and carrying out investigations as they move through Key Stage Two.

Assessment and feedback



Monitoring

Monitoring is the responsibility of the Science Lead. Monitoring of science includes (in accordance with whole school monitoring schedule): learning walks, book looks, environment looks, teacher planning, pupil voice and staff voice. Feedback and areas for development identified as a result of monitoring are fed back to staff and senior leaders as soon as possible. Annual attainment data is also collated and presented to senior and phase leaders on an annual basis; statutory data for Science is also submitted on a yearly basis via a Teacher Assessment for Ks2.