



Science Policy

Agreed at (please indicate with a *):

- Full Governing Body Meeting _____
- Children and Learning Committee Meeting _____*
- Resources Committee Meeting _____

Date: 29.6.23

Science Policy

“The most important thing is to not stop questioning. It is enough if one tried to merely comprehend a little of the mystery of each day”

Albert Einstein

1. What is the vision for science at Stamford Green?

It is our vision that our children:

- See themselves as scientists and to know about the accomplishments of a range of diverse scientists from around the world.
- Have an open mind, are curious, observant and ask questions about the world we live in
- Develop a progressive knowledge and understanding of biology, chemistry and physics through our well-planned curriculum
- Use practical investigations to observe, record data and draw conclusions, developing scientific enquiry skills

2. Our Science curriculum is brought to life by our seven commitments:

HAPPINESS

We want the children to be happy in their science lessons and to develop a love of science. Through practical investigations, the curriculum is enhanced and brought to life, which allows the children to see themselves as scientists. Whilst ensuring that lessons are fun and engaging, practical activities are planned purposefully and in line with curricular goals.

INSPIRING

We aim to inspire the children to develop a love of learning science. We ensure that the children are inspired by a range of diverse scientists from across the globe. We want the children to know that scientists are not just people in white coats in a laboratory – we want to open the children's mind to a range of people who have made a difference to the field of science. We teach the children about a different scientist each term in order to inspire them to have a love of science. Each year the school celebrates British Science Week to spark enthusiasm and interest in science topics which may not be covered in the National Curriculum.

LEARNING

Our curriculum is carefully planned and organised, building on previous learning. Working scientifically is taught progressively and is threaded throughout the subjects of biology, chemistry and physics to enable the children to see, experience and learn science in real life. The curriculum will teach the substantive knowledge of science, whilst also teaching the children to make predictions, form hypotheses, analyse and recognise patterns and draw conclusions in an age appropriate way.

Science lessons are built around an 'enquiry question' where all of the learning builds and contributes to the children being able to answer the scientific question at the end of the term/half term. Science lessons are taught on a weekly basis and so as a result, there are opportunities to build on previous learning, make connections and apply scientific skills, allowing the children to demonstrate progress (so that they know more and remember more). At the beginning of each science lesson, teachers plan for a scientific discussion, using the website 'Explorify' to encourage children to think like a scientist and encourage awe and wonder about the world.

TOGETHERNESS

Togetherness is exemplified through our approach to scientific enquiry. Children will work together to carry out investigations and will see themselves as a 'laboratory partner' whether working in a

pair or a larger group. Children will learn about the role they will need to play as a laboratory partner, including the important life skills of turn taking, listening to each other and contributing to discussions and when carrying out tasks in practical activities. Children will learn from each other as well as their teacher. We have formed strong links with Blenheim High School, one of our local secondary schools, which has enabled us to share resources to enhance the lessons we teach in school.

VALUES

In every science lesson, the school's twenty two values will be evident and in action. When making predictions and forming hypotheses, children will be respectful of each other's opinions. At times children will demonstrate courage when presenting a new idea or prediction. Children will be resilient and show effort – they will be inquisitive learners who are curious to find out about the world they live in. When working with a partner or in a group, to carry out investigations, children will be independent, responsible and show co-operation, tolerance and empathy.

AMBITION

We are ambitious for our children that they see themselves as scientists and know that they all can be scientists. We will develop this further in KS2 by using the term physicist, chemist and biologist. We ensure that there is a planned approach to the use of vocabulary to enable the children to talk like a scientist, and fully understanding subject specific vocabulary. We will encourage the children to challenge misconceptions and ask questions to deepen their understanding.

We are also ambitious for our teacher's subject knowledge and ensure that there are regular planned activities to update knowledge and continually learn.

ACHIEVEMENT

It is our aim that through our carefully planned curriculum, the children achieve well and will leave our school with science outcomes that are above the national expectations. We want the children to feel a sense of achievement in their science lessons. Children will experience scientific enquiry and practical investigations in full, enabling them to see themselves as scientists and to understand the process of investigation, forming hypotheses and drawing conclusions.

3. By the end of Year 6 at Stamford Green, our children will...

Behaviours	The children will behave as scientists. They will have utilised the attitudes, skills and knowledge from the science curriculum to ask questions, investigate and form theories. The children will have respectful behaviours towards their peers during group activities and will demonstrate our school's twenty two values.
Attitudes	The children will have a positive attitude towards science and see themselves as scientists. They will be confident to ask questions about the world around them and will have an enquiry-based attitude to learning. The children will be proactive in addressing misconceptions and exploring different ways to solve these.
Skills	The children will have developed their scientific enquiry skills in order to ask questions, make predictions and form hypotheses. The children will have used a variety of scientific equipment and will use these accurately to draw results. The children will be able to analyse their data and form conclusions. The children will have the skills to perform an investigation in a controlled and safe manner.
Knowledge	The children will begin to understand that science is the basis of everything around them. They will have a developing knowledge of biology, chemistry and physics and can use their substantive and disciplinary knowledge when carrying out different types of scientific enquiry. The children will have an expansive scientific vocabulary, which they will use correctly when discussing their learning. The children will demonstrate the knowledge of contributing

	factors to conduct experiments fairly and will understand the effect of variables.
Experiences	Children will be able to make links in their learning through real life experiences. They will be able to apply their knowledge in practical ways and will take part in experiments and investigations. The children will have a broad knowledge of different scientists and their influence in their field.
Technology	The children will begin to use equipment to gather data effectively and they will know how to use them accurately. The children will begin to understand the impact of how technology has enhanced modern day science and can discuss this confidently.
Sustained	The children will have a sustained and enthusiastic approach to their science learning and they will continue to show curiosity and ask questions. As the children leave our school, they will be well-prepared for the next stage of their education and will have a broad understanding of biology, chemistry and physics.

4. Feedback and Assessment

- a) For further information about how the school provides feedback to the children and how teachers make assessments about a child's learning, please refer to the Assessment (including marking and feedback) policy.
- b) Attainment in Science is reported to the Department for Education and parents/carers at the end of KS1 and KS2 as part of statutory reporting requirements.

5. Inclusion

- a) Learning opportunities will be available to every child, regardless of race, gender, class or ability. Pupils will be encouraged to value social and cultural diversity through their learning. They will listen to, and participate, in a variety of experiences in a positive and constructive manner.
- b) We recognise that in all classes, children have a wide range of abilities and so therefore we seek to provide suitable learning opportunities for all children by matching the challenge of the learning to the ability of the child.
- c) For further information, please refer to our Special Educational Needs and Disabilities (SEND) policy and our Teaching and Learning policy.

6. Subject Organisation

- a) Science is taught on a weekly basis. This ensures that there are opportunities to build on previous learning, make connections and apply scientific skills. In science lessons, the substantive and disciplinary knowledge are interwoven to allow the children to making meaningful links with the area of science that they are studying, whilst also learning to think and behave like a scientist.
- b) Science is planned through the use of an enquiry question, where learning through is focused towards the children developing the skills and knowledge to be able to answer the enquiry question. For further detail, please refer to the Science Compendium.

7. Monitoring and Evaluation

- a) The work of the Science subject leader involves ensuring that the curriculum is well planned, being informed about current developments in this area and providing a strategic lead and direction for the subject in the school.