Science Policy

Updated: September 2024
Next Review: September 2025

Contents

The member of staff responsible for this policy is: Mrs K Turrell

1 Intent

- To develop pupil's enjoyment and engagement in science.
- To develop pupil's scientific knowledge and conceptual understanding through the integrated coverage of biology, chemistry and physics.
- To enable pupils to effectively communicate scientific ideas by using scientific vocabulary.
- To develop positive attitudes which encourage collaborative learning and perseverance.
- To ensure pupils are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.
- To develop understanding of the nature, processes and methods of science through different types of scientific enquiry, which help pupils to answer scientific questions about the world around them.
- Connects and builds upon prior knowledge leading to progression and depth of understanding.
- Allow all pupils to achieve the best possible standards and achievements, whatever their starting point.
- To develop the teaching of science as part of STEM and to ensure there is collaboration with other STEM subjects through cross curricular teaching where suitable.
- To develop an inquisitive nature, and the skills necessary for scientific enquiry.

2 The Science Curriculum

Foundation Stage

Science is taught in the Reception class according to the Curriculum guidance for the Foundation Stage. It is incorporated in the Early Learning Goal 'Understanding of the World' in which pupils develop the crucial knowledge, skills and understanding that helps them make sense of their world.

Key Stages 1 and 2

The knowledge and skills within The National Curriculum Programme of Study are met through cross curricular opportunities. In Key stages 1 and 2, a unit of work for science is covered each term (see Appendix 1).

3 Implementation

Scientific Enquiry
Science is taught with an emphasis on the pupils engaging in practical enquiry to support/develop their understanding of scientific concepts and skills. Teachers use a range of strategies including: exploration, investigation, enquiry and illustration. Teachers try to ensure that some of the children's ideas are used as a basis for enquiry. All science topics begin and end with a hypothesis which the children need to prove/disprove, based upon their learning. This is to be displayed on the Science working wall in all classrooms.

Science and Computing
Pupils are taught to use a range of computing equipment to enhance their scientific learning, e.g. cameras to record investigations and observations. Programmes such as Excel are used to create graphs and charts to record results.

Recording Pupils' Work
Pupils are taught and encouraged to use a range of recording strategies to communicate their ideas and scientific findings including through various methods including written up experiments, graphs, charts and tables, photographs, verbal comments recorded either electronically or by an adult or diagrams and labels.

4 Assessment

Responsibility of the Class teacher
Summative assessments are made by class teachers at the end of each unit of work. These assessments will be recorded using the Cornerstones assessment grids. Objectives will be recorded using the following terms:

Not taught: This objective has not yet been taught.

Not attained: The child has been taught this objective but has not yet understood it.

Partially attained: The child has been taught this objective and is beginning to understand it. They may need support to consolidate the learning.

Attained: The child has been taught this objective and the teacher is confident that it has been understood and the concept has been grasped. The child will be able to confidently explain or demonstrate this objective.

Cornerstones allows teachers to see previous attainment and grading so they can monitor progress quickly and easily.

By assessing children in this way, it enables accurate end of key stage assessments and enables subsequent teachers to identify gaps in the children's prior learning and adapt their coverage of a topic accordingly. Formative assessment is continuously used through questioning, observing, discussion, verbal feedback and written marking. This is used to acknowledge the children's achievements and to show the pupils what they need to do in order to improve. Scientific spellings are modelled and shared on working walls. Scientific spellings are corrected in line with the child's phonics ability.

Responsibility of the Science Leader

The science leader develops and undertakes, in conjunction with the Head teacher, a monitoring schedule for each academic year including: work scrutiny, planning scrutiny, pupil interviews and lesson observations. Information from monitoring is shared with staff and, if necessary, a report made to the Governing Body. The science leader will review the planning from Cornerstones to ensure objectives are taught throughout the year and ensure assessments are completed regularly.

5 Impact

Through our rich and broad curriculum we are enabling the children to gain the knowledge, skills and understanding they need for their future. Each of our children is individual and unique and has a potential we must unlock. Using the Cornerstones curriculum will allow us to deliver outstanding lessons for all pupils, regardless of their starting points. Well planned learning will progressively build on prior learning and support children in producing outcomes of the highest quality.

The impact of the Cornerstones curriculum will learn to excellent progress over time in all year groups. The rich and broad curriculum and units of work will enable teachers to consistently plan lessons progressively building on prior knowledge and the progression of key skills in order to deliver lessons of the highest standard. Throughout Science lessons, children will become leaders, be organised, show resilience, use their initiative and communicate effectively, all linking back to our school values.

6 Resources

Class teachers are responsible for informing the Science Leader of resources which are required in order to deliver their planned curriculum. Science resources are stored in individual year groups. A science audit is carried out yearly by the science coordinator and new resources are sourced for each year group where necessary eg: to replace missing/broken items, to replenish consumable items or to add to the learning through a new topic or learning experience. Information books on science topics and a range of non-fiction texts relating to science topics are available in classrooms and as part of the guided reading resources within the school. Science based workshops and organisations are regular features of the school year, planned to enhance learning and help the pupils to relate scientific enquiry to the real world. The

whole school environment is used to ensure Science has a visible presence in school, where whole school science days are celebrated. There is a visible science display in school throughout the year which is updated regularly to celebrate scientific achievement and to share real science in the world around us.

7 Health and Safety

The safe use of equipment and materials is promoted at all times. The Association for Science Education document 'Be safe' has been adopted by the school as a realistic guide to primary school health and safety (available from the science leader). Teachers must take into account any health and safety and child protection issues; particular attention must be given to avoiding the use of anything which aggravates individual pupils' allergies. Risk assessments are carried out to ensure safety issues have been identified and that specific attention is made when activities are unusual and beyond the scope of normal safety practice, including any educational visits and off-site activities.
All accidents and incidents are reported in the accident book and relayed to the Head teacher who makes a decision as to appropriate action.

8 Additional Educational Needs

Intent

At Green park community Primary School, we believe that all children are entitled to receive a high-quality of education regardless of their needs or disabilities. We believe that it is vital that our children are equipped with the tools needed to become independent learners, both inside and outside of the classroom. We believe that inclusive education means providing all pupils with appropriate education and support alongside their peers. All children and young people should expect to receive an education that enables them to achieve the best possible outcomes, and become confident, able to communicate their own views and ready to make a successful into secondary school and then adulthood.

Through our first-quality teaching, planning and provision we:
- Ensure that needs are identified as early as possible and support is put into place
- Ensure that children have access to a broad and balanced curriculum which is appropriately differentiated to enable children to succeed
- Provide an accessible learning environment which is tailored to the needs of all pupils
- Develop children's independence - Regularly monitor the progress of children with SEND
- Work closely with parents and carers
- Work closely with external agencies and other professionals to ensure that there is a collaborative approach to support children with SEND.

Our curriculum includes not only the formal requirements of the National Curriculum, but also the range of additional opportunities that the school organises in order to enrich the experiences of our children. Our curriculum also includes the social aspects that are essential for life-long learning.

All pupils follow the National Curriculum at a level and a pace that is appropriate to their abilities. Our SEND philosophy places SEND children at the heart of personalised learning and our curriculum is tailored to meet individual pupils needs.

At times and when it is felt appropriate, modifications to the curriculum may be implemented. To successfully match pupil ability to the curriculum Green park community Primary School remain committed to:

-A range of teaching and learning styles.
-Differentiated learning materials
-Access to ICT and Technology.
-Additional support in class support
-Additional support out of class support
-Flexible groupings – including small group support work.
-An innovative, creative and supportive curriculum.
-The appropriate use of rewards and sanctions.
-A broad range of extra-curricular activities.
-Assessment procedures that emphasise pupils' strengths and achievements.
-Applications during national testing at Key Stage 2 to obtain access arrangements as appropriate.

Implementation

At Green park community Primary School, every teacher is a teacher of SEND. Our provision is enhanced by the collaboration of teachers, senior leaders, the SENDCo, support staff, external agencies, parents and most importantly the child.

Pupils with SEND will:
- Be included in all aspects of the school day
- Be provided with first quality teaching, adapted to meet their needs
- Be respected and acknowledged

Pupils with SEND may:
- Have specific 1:1 or group support to support them accessing different areas of the curriculum
- Have interventions outside of the classroom
- Take part in social, emotional and mental health interventions such as Boxall
- Receive additional support from a Speech and Language Therapist
- Work alongside outside agencies such as the Educational Psychologist, Occupational Therapist, Social, Emotional and Mental Health team, Paediatrician, Early Help etc.

Impact

As a result of the provision above, children at Green park community Primary School will:
- Feel safe, secure and cared for
- Show confidence and resilience in the classroom
- Demonstrate high levels of engagement in activities
- Make progress from their starting points
- Develop independence and skills to support them throughout life
- Work collaboratively with their peers on a shared task

9 Promoting Science

The Subject Leader is responsible for providing whole school activities to raise the profile of the subject with parents/carers and children. During the course of the school year the pupils at Green Park Community Primary School have the chance to experience science beyond the confines of their classrooms. These may change from year to year depending on opportunities that are made available to them. Since 2019, these opportunities included but were not limited to:

- Whole school Science day
- Attending East Kent Science Jamboree
- Year group trips, including: Kearsney Abbey and Russell Gardens, Living World, Old Park Hill Community Park, Botany Bay and Samphire Hoe
- Visits to local secondary schools for small group workshops

10 The Role of the Subject Leader

- To undertake monitoring of standards in science and use this to inform the science action plan.
- Provide leadership and management of their subject to secure high quality teaching and learning.
- Play a key role in motivating, supporting and modelling good practice for all staff.
- To organise and/or deliver targeted science CPD – both on an individual and whole staff level.
- To develop and review the science policy annually.
- To liaise with outside agencies and attend subject specific courses.
- To report to the Head teacher and Governing Body on science related issues.
- To plan and organise the allocation and purchase of resources in accordance with available budget.

11 Appendices

1. National Curriculum 2014
2. Science Coverage – using Cornerstones