Science Policy 2025-2026

Rationale

Children are natural scientists; they are eager to enquire about their environment. Science aims to encourage children's questioning and provide knowledge and understanding of the physical world. Perhaps more importantly, it also aims to develop children's independent investigative skills to empower children to find answers to their own questions, make positive changes and solve problems.

Scientific thinking and questioning are integral to so many areas of our lives and will have lasting impact into our futures too. Whether through understanding our changing world; engaging in medical advances; exploration of the solar system or inventing life-changing designs of the future.

General Purposes

Our aims of science are to enable children to:

- ask scientific questions;
- use practical methods to find answers to their questions;
- research answers to their questions;
- carry out experiments accurately and fairly;
- use scientific equipment with confidence;
- know and understand concepts within physical processes, life processes and chemical processes;
- make links between scientific ideas and knowledge and build on prior learning;
- analyse results and
- evaluate work for validity and accuracy.

How do we teach Science?

Our aim is for children to make links between scientific ideas and knowledge and build on prior learning. We hope for children to learn from practical mistakes from a young age, become more familiar and confident with equipment and therefore be more experienced scientists.

In each year group we aim to help every child achieve, with levels of adapted challenge in lessons. Children are encouraged to work, individually, in pairs, groups, supported or independently in order to encourage discussion, to develop confidence and independence. Provisions and support are put in place to support children that find Science challenging but also to extend the children that are talented in this subject. Adult support is directed to specific groups of children depending upon their need.

The use of our school grounds, local walks and visitors to school encourage enthusiasm for learning, enabling the children to see how Science is part of our everyday life and the world around us.

Children work in dedicated Biology, Chemistry and Physics books depending on the topic being taught. By organising the science topics in this way, children are able to make stronger links between the topics covered within each branch of science.

Science is celebrated and promoted in school in a variety of ways too. Most notably during British Science Week.

How do we plan?

All of the objectives listed in the National Curriculum have been organised and planned into Medium Term Plans to ensure progression and coverage is consistent across the school. We

use the best lesson inspirations and resources from the Kent Scheme, Outstanding Science and Hamilton Trust to ensure the children access the knowledge in appropriate ways to support their learning fully. It is important to ensure that the knowledge and scientific facts lead our teaching and learning in Science to prevent misconceptions or errors in understanding. We then practise our 'Working Scientifically' skills to support and embed our learning and understanding. By the time children are in Years 5 and 6, they will begin to use their learning to pose their own scientific enquiries and plan their own investigations.
To meet our aims, where possible, we try to use real-life contexts to bring Science to life in school. We use a variety of techniques to meet the needs of all learners including practical investigative work, internet and books for research, observations and discussions. We use whole-class teaching as well as group work.

We cater for all learners in our planning, using a variety of hands on activities for example:

- diagrams and pictures, oral explanations and IT to reinforce vocabulary.
- oral explanations
- shared group sheets
- video recording
- drawing/cartoon strips
- photos of investigations

Programmes of Study keep parents informed of subject areas to be taught in Science. These are sent home every half term and are also available for parents to see on the school web site.

SEND

At Park Hall Junior Academy, we ensure that all pupils, including those with Special Educational Needs and Disabilities (SEND), can access and succeed in the science curriculum.

Our ambitious, well-sequenced science curriculum enables all pupils to develop knowledge of the world and secure scientific enquiry skills. Pupils with SEND learn the same core knowledge, vocabulary and investigative approaches as their peers. Key scientific concepts and skills are revisited over time to strengthen understanding and support pupils in remembering more. Through carefully structured and supported investigations, children are taught to observe, analyse, predict and explain their findings. Subject-specific vocabulary is explicitly taught and reinforced, with additional scaffolding where needed to ensure accurate understanding and use of scientific terminology.
Our curriculum promotes questioning, critical thinking, resilience and confidence. We maintain high expectations for pupils with SEND, providing tailored support and reasonable adjustments without narrowing the curriculum, ensuring that challenge and ambition remain accessible to all.

Inclusion and Adaptive Teaching

Science lessons are practical, engaging and inclusive. Teachers use a range of approaches, including discussion, visual models and hands-on investigations, to support understanding. Teaching is adapted so pupils can access the same learning objectives. This may include pre-teaching vocabulary, breaking learning into smaller steps, modelling scientific thinking and providing structured scaffolds and targeted questioning.
Adaptations are designed to support access to the same learning objectives, while building independence over time.

Reasonable Adjustments

Where appropriate, reasonable adjustments are made in line with individual needs. These may include additional processing time, adapted resources, alternative ways of recording (e.g. oral responses or photographs of practical work) and focused adult support. These adjustments enable pupils to demonstrate their understanding while maintaining high expectations.

In Practice

Pupils with SEND receive high-quality teaching, clear explanations and structured support during investigations. Regular opportunities to revisit prior learning help pupils develop secure scientific knowledge and enquiry skills over time.

How do we assess?

Teachers use Assessment for Learning throughout the teaching of topics to tailor and adapt planning to suit the needs of the learners. Skills are assessed by teachers during practical experiments, using the Success criteria, ensuring the development of skills throughout the school. Teachers use their assessment of children's responses, practical skills, written answers and confidence to inform their planning. Children receive feedback about their progress informally either verbally or via written comments and questions in their book. Children use an assessment face to show how they felt about their learning each lesson

Marking

In line with the school's Marking Policy, marking should be carried out in detail at least once a week. Next steps should be written to further scientific thinking or address misconceptions.

Presentation

The presentation in books is in line with the school's Presentation Policy to set out their work appropriately.

How do we monitor teaching?

Teaching is monitored via classroom observations carried out by the Senior Leadership Team and the Science coordinator. We look for a high level of challenge, independence in investigative work, consistency and confidence in using scientific language and as well as adaptive teaching and reasonable adjustments where needed. In books monitoring, we look for a progression in learning, challenge specific to the children, independence in recording information and a variety of learning styles. We evaluate strengths and areas for development and feedback to individual teachers. Teachers are encouraged to share successful ideas.

Equal opportunities

All children will have equal access to all aspects of the curriculum and school life. We will monitor our practices to achieve this and ensure that we pay regard to the Equality Act 2010.

Resources

Science lessons take place in classrooms and outside. Our school also has an upper and lower 'Wet Area,' where science experimentation can take place. All topic-specific equipment is kept centrally in the Science room (upper wet-room). The Science Coordinator orders essential equipment from the Science budget.

Health and Safety

Children are reminded of the safety rules, when using equipment that could cause harm. Risk Assessments have been produced for the experiments we carry out using support from CLEAPSS. Teachers are required to reference these when planning and ensure all staff involved with the lessons have been fully informed of potential risks.
Parents have informed School of any allergies their child has, this is referred to when the need arises and is considered during planning.

Conclusion

We aim to teach our children Science in a way which will excite, encourage curiosity and empower them. We aim to build knowledge, confidence and challenge all pupils. Science allows children to have a better understanding of global issues the world is facing, and as the adults of tomorrow, the skills with which to deal with them.

Mrs S Griffiths
Science Lead