PARKLANDS INFANT AND NURSERY SCHOOL

SCIENCE POLICY

Approved by the Governing Body of Parklands Infant & Nursery School

Date: Tuesday 14th October 2025

Signed: _____

Mrs S Evitts (Chair of Governors)

Parklands Infant and Nursery School
Science Subject Policy – September 2025

Section 1: Introduction to the Policy

Purpose
The purpose of this policy is to describe our practice in Science and the principles upon which this is based.

Aims
This policy is set out to ensure consistency in the teaching and learning within Science across the school in order to ensure pupils are equipped with the ability to explore, discover and investigate. These first hand experiences will in turn enable them to understand more about the world they live in. We aim to ensure such experiences will be appropriate, relevant, challenging and satisfy the children's curiosity.
We aim to:
- build on the children's natural curiosity.
- teach the children scientific knowledge.
- teach the children scientific skills.
- stimulate them to investigate, question and develop attitudes of science.
- teach them to communicate ideas using appropriate scientific language.
- teach them how to evaluate their findings and suggest explanations.

This policy supports our school mission statement of: "To establish a life-long love of learning within a caring environment, in which we encourage all children to fulfil their potential through enjoyable and enriching experiences".

It also supports our whole school ethos of developing the Parklands Person. This includes the *Spiritual Moral Social and Cultural Development* and supports Fundamental British Values.

Consultation

The policy was put together by Laura Chivers in consultation with teaching staff, pupils, parents/carers and school governors.

The Intent, the Implementation and the Impact of our Science Curriculum

Intent

At Parklands Infant and Nursery School, we believe that a high-quality Science education provides the foundations for understanding the world and equips learners to think of themselves as Scientists. We believe that Science is vital to the world's future prosperity and we encourage children to understand how Science looks in the real world. All pupils should be taught essential aspects of the knowledge, methods, processes and uses of Science. Pupils should be encouraged to recognise the power of key knowledge, key vocabulary acquisition and develop a sense of excitement and a curiosity of the world around them. Children should be encouraged to understand how Science can be used to explain what is occurring, predict how things will behave and then analyse the causes. Science in our school is about developing children's ideas and sparking their curiosity, enabling them to ask and answer questions about the world around them.

The aim of the progressive Science curriculum is to ensure children gain detailed and connected knowledge and remember what has been learned previously. Teachers plan the curriculum together to ensure full coverage and progression of the Science curriculum is achieved, without causing cognitive overload.
We ensure that all children are provided with rich learning experiences that aim to:

- Prepare our children for life in an increasingly scientific and technological world today and in the future.
- Help our children make connections between previous knowledge and remember more of what they learn.
- Help develop and extend our children's scientific concept of their world.
- Build on our children's natural curiosity and developing a scientific approach to problems.
- Develop the use of scientific language, recording and techniques.
- Develop the use of computing in investigating and recording.
- Make links between Science and other subjects.

We intend to provide all children regardless of ethnic origin, gender, class, aptitude or disability, with a broad and balanced science curriculum.

The Implementation

The teaching staff at Parklands ensure that all children are exposed to high quality teaching and learning experiences, which allow children to explore their outdoor environment and locality, thus developing their scientific enquiry and investigative skills. In ensuring high standards of teaching and learning in Science, we implement a curriculum that is progressive throughout the whole school from EYFS to Year 2. Planning for Science is a process in which all teachers are involved to ensure that the school gives full coverage of, 'The National Curriculum programmes of study for Science 2014' and, 'Understanding of the World' in the Early Years Foundation Stage. Science teaching at Parklands Infant and Nursery School involves adapting and extending the

curriculum to match all pupils' needs. Curriculum planning is done with input from all year groups enabling the knowledge to be built upon year on year and specifically tailored to meet the needs of our children. We plan 'Link it' lessons which enable children to revisit and showcase knowledge they have gained in previous years and allow them to build connections to the new knowledge they are about to receive. Memory retrieval tasks are planned to ensure knowledge is retained and can be recalled to support later learning. Children are immersed in carefully chosen scientific vocabulary, which aids children's knowledge and understanding not only of the scientific aspect they are studying, but of the world around them. Teachers ensure that key vocabulary is constantly modelled, explained and encouraged to ensure it is embedded.
The curriculum identifies and sequences the disciplinary knowledge that children need in order to work scientifically and includes a range of opportunities for children to develop skills in pattern seeking, grouping and classifying, carrying out their own research and conducting practical investigations.

We also plan exciting opportunities for Science during British Science Week.

The Impact

The impact and measure of this is to ensure children not only acquire the appropriate age related knowledge linked to the Science curriculum, but also scientific enquiry skills which equip them to recognise ways in which they can answer scientific questions.
All children will have:

- A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
- A richer vocabulary which will enable to articulate their understanding of taught concepts.
- High aspirations, which will see them through to further study, work and a successful adult life.
- A chance to succeed in Science. Children will remember more of what they have learned and make links between previous learning to make it more meaningful.

Section 2: Procedures and Practice

Roles and Responsibilities

The Science leader is responsible for providing an overview of the subject across the school to inform staff planning and to offer advice in the ways in which the curriculum can be delivered in an effective and engaging way. They should have an up-to-date knowledge of the subject requirements and ensure that these are met across the school, as well as having an overview of assessment. They are responsible for ensuring that an overview of the subject is available on the school website. The Science leader also has a sound knowledge of the resources, which are available within school, and ensures that resources are replenished and updated as necessary. The Science leader is responsible for the planning and implementation of any subject specific events, which are ran in the school.

Individual teachers are responsible for the day to day planning, delivery and assessment of the Science curriculum.

The governor for Science is responsible for ensuring there is a good professional dialogue with the subject leader throughout the school year.

How SMSC and British Values are integrated in the Science curriculum

Spiritual, moral, social and cultural education through Science

Pupils' spiritual, moral, social and cultural education is considered a whole school issue. Spiritual, moral, social and cultural development is promoted not only through all the subjects of the curriculum but also through the ethos of the school, the development of positive attitudes and values and planned time for reflection. This policy supports and reinforces the aims of Parklands Infant and Nursery School, valuing all children and staff equally and as individuals. At Parklands, science contributes to children's SMSC development through:

Spiritual Education

Spiritual education within science involves pupils being encouraged to reflect on the wonder of the natural world. They are encouraged to ask questions about how living things rely on and contribute to their environment. This promotes openness and confidence to voice an opinion. Through science, pupils are achieving a sense of enjoyment and fascination about themselves, others and the world around them.

Moral Education

Moral education involves pupils having awareness of the ways that science and technology can affect society and the environment. Pupils develop an interest in investigating and offering reasoned views about moral issues. Pupils are given the chance to consider the wonder of the natural world and the inventions, which have made the world a better place. Teaching allows opportunities for pupils to speculate about how science has both a positive and sometimes a negative result on their own environment.

Social Education

Social education within science involves students working within a group, listening and respecting the views of all the members. They need to work cooperatively within practical activities. Often they will have to show respect for differing opinions. Through learning about our environment, pupils will be exploring the social dimension of scientific advances and energy processes with time to reflect upon their impact.

Cultural Education

Cultural education in Science means pupils may have the opportunity to learn about the ways in which scientific discoveries from around the world have affected their own lives. Raising awareness that scientific developments are the product of many different cultures.

Promoting British Values through Science

Democracy

In Science, all children are given equal opportunity to share their opinions. Pupils will be taught and receive opportunities to develop their understanding of fairness both through practical tasks and the importance of listening and considering every ones views and opinions.

Individual Liberty

Through Science, pupils will be encouraged to make choices and respect the choices of other pupils. Science lessons will encourage children to share their choices taking responsibility and demonstrating the importance of those choices.

Rule of Law

When Science is delivered, there are opportunities to investigate and participate in different practical experiences. Pupils understand that safety rules must be followed to ensure the safeguarding of all pupils. Pupils are aware that these rules are necessary to ensure inclusion and cooperative learning as part of an integrated science lesson.

Mutual Respect and Tolerance of Different Faiths and Beliefs

Through the teaching of Science pupils will demonstrate the mutual respect and tolerance of different faiths and beliefs. This will be evident through the regular group work and class discussions. Pupils will demonstrate respectful behaviour towards other pupils, staff and the environment. Pupils will show tolerance within their behaviour towards each other. Science investigations allow opportunities to question, discuss with each other scientific discoveries, and demonstrate respect for every ones views.

SEND in Science

At Parklands Infant and Nursery we are committed to equality and inclusion regardless of ability. In accordance with the Special Educational Needs and Disabilities Policy, children with special educational needs or disabilities are included in all lessons. Class Teachers are expected to ensure that appropriate support or adjustments are in place where needed, in accordance with support plans or Educational Health and Care plans. This could include the use of visual prompts such as photographs or figurines, the use of PECS cards or Makaton signs where appropriate, breaking down tasks into smaller steps, the use of alternative recording methods or additional adult support. At Parklands we believe children with special educational needs or disabilities must be given every chance to demonstrate their knowledge in order to reach their full potential in Science. Please see our *SEND policy* for more information.

Section 3: Aspects

Planning

Science is planned as part of the Learning Challenge Curriculum and adapted from the Focus education curriculum. Teachers will plan for opportunities to allow children to undertake different types of scientific enquiry and investigations in order to discover the answers to key scientific questions and to develop and deepen their scientific knowledge. At Parklands we develop a progression document, medium-term and short-term plans which are tailored to meet the specific needs of our children. Teachers plan together to ensure that previous knowledge is built upon successfully. In each medium-term plan, an overarching question is broken down into component parts which detail the substantive knowledge the children will gain and the disciplinary knowledge to be developed. These plans also include the carefully chosen key vocabulary the children will learn.

Early Years Foundation stage teachers will plan opportunities to ensure children are gaining first hand experiences to investigate the natural world, make observations and discover knowledge about the world around them. They will ensure children are given opportunities to raise their own questions and teachers will model and encourage them to comment on their experiences.

Key stage 1 teachers build upon and constantly refer back to the knowledge gained in the Early Years. Teachers plan opportunities for children to experience different types of scientific enquiry and begin to use simple equipment for researching, measuring and recording.

Teaching and Learning

A variety of teaching and learning styles are used in Science lessons in order to develop children's knowledge, skills and understanding. Children are given the opportunity to work scientifically and to experience different types of scientific enquiries, including practical activities, and begin to recognise ways in which they might answer scientific questions. They are given the opportunity to gather data through simple tests, to record this data and to talk about what they have found out as a result of their investigations. Teachers will carefully ensure that children's scientific knowledge is developed and deepened as a part of science lessons without causing cognitive overload. Previous knowledge is constantly referred to and built upon so that children can make meaningful links between what they learn. The Science lead has developed knowledge organisers as a tool to aid memory retrieval. Key vocabulary is modelled, repeated and displayed to ensure children's understanding and encourage their use of it. Children are encouraged to be the talkers with methods such as talk partners, peer support and self assessment. Children will use technology in lessons where it enhances their learning. They take part in discussions and have the opportunity to present their work to the rest of the class. Science work and photographs of practical work is displayed on learning journeys across the school in classrooms and is prominent in a central location in our family room for all children and visitors to see.

At Parklands we recognise that there are children of differing scientific abilities and learning styles in all classes, and we aim to provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. This is achieved through a variety of ways, such as setting open ended tasks, differentiating the tasks according to ability and using adults to support individuals or groups of children.

Organisation

Science is taught in the Early years as an integral part of topic work planned from the children's interests and needs. Scientific aspects of the children's work are related to the objectives set out in Birth to 5 Matters and Development Matters. Science is taught within the area of 'Understanding the World'. Activities inspire the pupils to investigate and make observations about the world around them and to help them raise their own questions such as "Why...?", "How...?" and "What happens if...?".

In Key Stage One Science will be taught as part of the weekly timetable. Children will be involved in whole class discussions, group work and individual recording. Activities will develop the "working scientifically" enquiry skills through asking and answering simple questions, gathering and recording data and through discussions of what has been found out. Lessons make effective links with other curriculum areas and subjects, especially Literacy, Mathematics, and computing. Activities are challenging, motivating and extend pupils' learning. Pupils have frequent opportunities to develop their skills in, and take responsibility for, planning investigative work, selecting relevant resources, making decisions about sources of information, carrying out activities safely and deciding on the best form of communicating their findings.

Assessment

All lessons have clear learning objectives, which are shared and reviewed with the pupils effectively. A variety of strategies, including questioning, discussion and marking, are used to assess progress. The information is used to identify what is taught next. The subject of

Science will be an on-going assessment of the children's skills, knowledge and understanding. Teachers within year groups and key stages will moderate decisions and the Science lead will carry out monitoring exercises which ensure teacher judgements are correct.
In the Early Years the Early Learning Goal is used at the end of the year and is based on professional judgement of the teachers and supported by a range of evidence gathered from Tapestry observations and focus tasks throughout the year.
In Key stage 1 termly assessments are carried out and recorded on our 'insight' tracking system. Teachers make ongoing assessments through the use of feedback sheets and feedback sessions which address any children who needed further support, misconceptions or children who have exceeded expectations.

Monitoring
The Science subject lead is responsible for monitoring the standards of children's work and the quality of teaching. The leader supports colleagues in the teaching of Science by addressing CPD needs and by giving them information about current developments in the subject, and by providing a strategic lead and direction for the subject in the school. The subject lead is also responsible for reviewing developments for Science identified on the School Improvement Plan, evaluating strengths and weaknesses in the subject, and indicating areas for further improvement. Monitoring exercises are carried out termly in accordance with the science action plan. Reports are shared with staff and the responsible governor.

Child protection and Safeguarding
Parklands Infant and Nursery School operates a whole school approach and ethos to safeguarding and protecting children.
Teachers constantly set a good example for safety and give clear instructions to children when carrying out investigations or using equipment as per the health and safety policy.
When the use of technology is appropriate during science, children are reminded of our safety rules when using technology and Smartie the penguin is clearly displayed near technology in the classrooms.

Parent Partnership
Parents and carers have an important role to play in helping our pupils learn about Science. Their role is enhanced by the use of science displays around the school to raise their interest and the interest of their children in the subject. Parents have full access to the school website, which features a science page. Parents are regularly informed of their child's development in science through Focus child meetings and end of year reports.

Section 4: Conclusion

Monitoring and Review
The governor with responsibility for Science is primarily responsible for monitoring the implementation of this policy. This will be through ongoing discussion with the subject leader and consideration of the evidence gathered in the subject file. The governor will report on this to the curriculum committee. The work of the subject leader is also subject to review by the head teacher as part of our performance management arrangements.

Other Documents and Appendices
The Science policy should be read in conjunction with our policies for curriculum, teaching and learning and assessment and our child protection and safeguarding policy

and health and safety policy. It is in reference to the National Curriculum for Science, EYFS Statutory Framework, EYFS Development Matters.

Governor Approval and Review Dates

The policy is to be reviewed annually.