Science Policy

January 2026

Approved by the Governing Body Strategy Group 08/01/26

This Policy is due for renewal in Term 3 2027-2028

SCIENCE POLICY

OF

GODINTON PRIMARY SCHOOL

SECTION ONE: INTENT

INTENT (as displayed on our school website)

At Godinton Primary School, engaging and exciting hands-on science lessons sparks our children's natural curiosity in the world around them. From exploring the workings of the human body, testing the properties of different materials, researching our solar system or creating electrical circuits we provide our children with the foundations needed to understand the world we live in across the fields of Biology, Chemistry and Physics.

Our curriculum enables our children to become good enquiry based learners – excellent thinkers, who are able to work collaboratively with others to plan and carry out investigations to test ideas and theories using a range of different equipment. It provides opportunities for children to gather results, evaluate the evidence obtained and to draw conclusions from their findings. Links are made with the children's mathematical skills, including collecting, presenting and analysing data and they are immersed in key scientific vocabulary, which supports the development of their scientific knowledge and understanding.

We want our children to have WOW moments when they are enthralled about the discoveries they make, whether this is through launching parachutes, watching chicks hatch, melting materials or growing plants under different conditions. We aim to make science a subject that children are excited to talk about.

As part of our Guiding Stars curriculum, Science is the leading light subject for '**Perseverance**'.

Within our science curriculum, the children will try things out to test a hypothesis and will draw conclusions based on repeated experiments. The children learn that there isn't always a final answer and that sometimes there are many possibilities. The children are encouraged to take a trial and error approach using the skills and knowledge they have, they consider the best place to start and where they need to end up. They explore how famous scientists paved the way for discovery, built on ideas of the past and embraced new technology. They learn how solutions are born out of perseverance and develop a desire to make discoveries of their own.

SECTION TWO – TEACHING AND LEARNING STYLE

2.1 We use a variety of teaching and learning styles in science lessons. Our principal aim is to develop children's knowledge, skills, and understanding. Sometimes we do this through whole-class teaching, while at other times we engage the children in an enquiry-based research activity. We encourage the children to ask, as well as answer, scientific questions. They have the opportunity to use a variety of data, such as statistics, graphs, pictures, and photographs. They use ICT in science lessons where it enhances their learning. They take part in role-play and discussions and they present reports to the rest of the class. They engage in a wide variety of problem-solving activities. Wherever possible, we involve the pupils in 'real' scientific activities, for example, researching a local environmental problem or carrying out a practical experiment and analysing the results.

2.2 We recognise that there are children of widely different scientific abilities in all classes and we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways by:

- Adaptive teaching as appropriate, will allow all children to progress in their learning. Setting common tasks which are open-ended and can have a variety of responses;
- Children will be encouraged to record in a range of ways. Teachers will carefully identify the reasons for a particular method of recording. Children will record independently when appropriate.
- Providing resources of different complexity, matched appropriately to ability.
- Using teaching assistants to support the work of individual children or groups of children.
- Science lessons will make a positive contribution to the curriculum for English, Maths, IT, PSHE and spiritual, moral, social and cultural development.

SECTION THREE – SCIENCE CURRICULUM PLANNING

3.1 Our Curriculum implementation is below. This information is also provided on our school website

IMPLEMENTATION

At Godinton Primary School, we follow the National curriculum for Science in both Key Stage 1 and Key Stage 2. Class teachers usually teach Science weekly although there is flexibility in planning to teach a science unit in a block, if this is more appropriate to the year group's overall termly theme.

We ensure that all topics are covered and scientific knowledge and progression is enabled through the year groups. Key objectives are drawn from the National Curriculum although teachers have access to the Kent Scheme of work for Science to support lessons and adapt, as appropriate, in order to match the needs of the children in their class. Alongside the development of scientific knowledge, we have also identified and developed key skills that

we wish our children to gain during their science lessons at Godinton. Our Key skills document identifies specific year group skills which will build upon previous learning and provide children with the necessary skills to access their curriculum in their future years. In science lessons, children have opportunities to work collaboratively and practically to investigate and experiment. Children will be able to explain the process they have taken and be able to reason scientifically.

Through our planning, we ensure that we provide problem-solving opportunities that allow children to apply their knowledge, and find out answers for themselves. Children are encouraged to ask their own questions and are given opportunities to use their scientific skills and research. This curiosity is celebrated within the classroom. Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess regularly to identify those children with gaps in learning. Tasks are selected and designed to provide appropriate challenge to all learners, in line with the school's commitment to inclusion.

The skills associated with working scientifically are embedded into lessons to ensure that skills are systematically developed throughout the children's time at Godinton. New vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in keeping with the topics. Teachers encourage children to use a developing scientific vocabulary as they progress through each year group. Time is spent during lessons introducing and reinforcing age appropriate scientific vocabulary. Children are given opportunities to consolidate their use of scientific vocabulary as they move through the year groups. Children are encouraged to use scientific vocabulary, both written and verbal, to explain their ideas and make sense of their observations and findings. Teachers demonstrate how to use scientific equipment and provide children with numerous opportunities to use the equipment during investigative work.

Children are offered a wide range of extra-curricular activities, visits, trips and visitors to complement and broaden our curriculum and learning takes place both inside and outside the classroom.

These units are planned in accordance to the key objectives outlined, both knowledge and skill, and teachers identify and use high-quality resources to support lessons, including and not limited to the Kent Scheme of Work for Science (2014), Developing Experts and Explorify.

The following topics are covered throughout Key Stage 1:

Animals, including Humans

Everyday Materials

Plants

Seasonal Changes

Living Things & their Habitats

The following topics are covered throughout Key Stage 2:

Plants

Living Things & their Habitats

Animals, including Humans

Rocks

Light

Electricity

Sound

Properties and Changes of Materials

Earth & Space

Evolution & Inheritance

Forces & Magnets

SECTION FOUR – FOUNDATION STAGE

EYFS

The EYFS framework is structured very differently to the National Curriculum and it is organised across seven areas of learning rather than subject areas. Science appears under the specific area of **Understanding the World**, but it also features in the **Communication and Language**, and **Personal, Social and Emotional** areas of learning.

In our Foundation Stage Classrooms, Understanding the World is taught through a play-based and interactive approach under termly topics such as 'It's Cold Outside', 'Ready, Steady, Grow', 'Hello Autumn' and 'To Infinity and Beyond'. We carefully plan lessons, activities and experiences that ignite curiosity, awe, and wonder and inspire children to explore and ask questions about the world around them. Where possible, we aim to make strong links to the children's own experiences and interests, particularly through our 'I Wonder...' lessons. The children's own questions form the starting point of our planning and allow the children to gain knowledge and understanding of concepts and ideas in a way that is meaningful to them. For example, one of our children was keen to find out how bees make honey, another was fascinated by carnivorous plants, and another interested to know how strong ice is. We were able to enhance the children's learning environment and offer a wealth of knowledge and information to reflect these questions and the learning commenced! The

outside learning environment plays an important role in our teaching of Understanding the Word, as it does in all the areas of learning in the EYFS. At Godinton Primary School we provide children with regular opportunities to explore the natural world throughout our beautiful grounds, including in our carefully curated forest area, large field with established trees, and pond area. You will often find our children hunting for minibeasts amongst the autumn leaves or using and exploring the natural materials they find to create their own transient art. The children are taught to recognise change in the world around them as the year progresses, and explore physical change through fun and exciting experiments.

It is our aim that when children at Godinton Primary School finish their first year at school and move into Year 1, they will be able to:

- Make comments about what they have heard and ask questions to clarify their understanding.
- Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.
- Explore the natural world around them, making observations and drawing pictures of animals and
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

SECTION FIVE: THE CONTRIBUTION OF SCIENCE TO OTHER SUBJECTS

5.1 Learning Adventure

At Godinton Primary School, we adopt a thematic approach but ensure that each lesson has clear subject objectives and that the children know which subject is being taught. Our Science curriculum forms part of our Learning Adventure Curriculum. As far as possible, all work is linked to the term's topic, including the genres of writing being. Science work completed is recorded within Learning Adventure books. We do not have separate science, history, geography books. Recording all work completed within a topic helps parents, staff and children to see the learning journey that has taken place over the course of a term., We ensure that the children receive a broad and balanced curriculum across an academic year.

5.2 English

Science contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. Some of the texts that the children study in English are of a scientific nature. The children develop oral skills in science lessons through discussions (for example about the environment) and through recounting their observations of scientific experiments. They develop their writing skills through writing reports and projects and by recording information.

5.3 Mathematics

Science contributes to the teaching of mathematics in a number of ways. The children use weights and measures and learn to use and apply number. Through working on investigations they learn to estimate and predict. They develop the skills of accurate observation and recording of events (using tables and graphs). They use numbers in many of their answers and conclusions.

5.4 Computing

Children use ICT in science lessons where appropriate. They use technology to support their work in science by learning how to find, select, and analyse information on the Internet. Children use ICT to record (for example using dataloggers, microscopes and on-line simulations), present and interpret data and to review, modify and evaluate their work and improve its presentation.

5.4 Personal, social and health education (PSHE) and citizenship

Science makes a significant contribution to the teaching of personal, social and health education. This is mainly in two areas. Firstly, the subject matter lends itself to raising matters of citizenship and social welfare. For example, children study the way people recycle material and how environments are changed for better or worse. Secondly, children benefit from the nature of the subject in that it gives them opportunities to take part in debates and discussions. They organize campaigns on matters of concern to them, such as helping the poor or homeless. Science promotes the concept of positive citizenship. SRE forms part of our science curriculum as well as linking with PSHCE. Further details of this are to be found in our policy for SRE.

5.5 Spiritual, moral, social and cultural development

Science teaching offers children many opportunities to examine some of the fundamental questions in life, for example, the evolution of living things and how the world was created. Through many of the amazing processes that affect living things, children develop a sense of awe and wonder regarding the nature of our world. Science raises many social and moral questions. Through the teaching of science, children have the opportunity to discuss, for example, the effects of smoking and the moral questions involved in this issue. We give them the chance to reflect on the way people care for the planet and how science can contribute to the way we manage the earth's resources. Science teaches children about the reasons why people are different and, by developing the children's knowledge and understanding of physical and environmental factors, it promotes respect for other people.

SECTION SIX: TEACHING SCIENCE TO PUPILS WITH ADDITIONAL EDUCATIONAL NEEDS

6.1 We teach Science to all children, whatever their ability. Science forms part of the school's curriculum policy to provide a broad and balanced education to all children. We

provide learning opportunities matched to the needs of children whether they have special educational needs or are academically more able and take into account the individual targets set for them.

SECTION SEVEN: ASSESSMENT AND RECORDING

Monitoring children's achievements and attainments

7.1 Teachers provide feedback to the children on a regular basis; this may be verbally, through written feedback in the children's book or group flip chart feedback (see marking and feedback policy)

7.2 Teachers assess where the children are working at in relation to the scientific knowledge objectives for each year group, utilising a range of evidence from lessons and making use of the '**Making Primary Science Assessment Work**' scheme.

7.3 Throughout the year, class teachers will track and update the children's progress towards the Working Scientifically objectives as they are covered throughout different units of work.

7.4 Overall summative judgements will be recorded twice a year by class teachers on Arbor. The objectives are split between knowledge and skill where the class teacher shall provide assessment that is 'best fit' for each child, i.e. whether they are working below age-related expectations, at age-expected or are exceeding the age-related expectations. This data shall be recorded on Arbor for each year group. Children who appear not be making the expected progress will be highlighted, and, with help from the Science lead, actions will be taken to support them with developing the aspect of the learning with which they are struggling with.

7.5 The science leader will analyse this and **end of year data** and will use this to inform the other teachers as to how the children in school are progressing from year to year.

7.6 At Godinton Primary, we issue ~~three~~ two pupil reports per academic year. ~~Effort in~~ with pupil attainment shared with parents in both the Spring and Summer reports.

7.7 The science leader will perform **children interviews/pupil conferencing** throughout the year to assist the other teacher with making summative judgements, as well identify aspects of the children's learning that require developing.

Monitoring provision for science in the school

7.8 Each year the science leader will observe science lessons being taught across the school. These observations will be used to identify areas of strength and where learning can be better developed in the future.

7.9 Each year the science leader will check that every class has covered the aspects of science as indicated in the long-term plan.

7.10 The science leader will monitor the use of science resources (equipment, IT, written materials, people, places and spaces) throughout the year in order to ensure that the subject is adequately resourced.

7.11 The science leader will maintain a record of wider opportunities that have been provided for the children.

SECTION EIGHT – RESOURCES

The school provides useful resources for all Science units across the school. We keep these resources in a central store where there is a box of equipment for each unit of work. The school also has a good supply of science topic books and ICT resources to support children's individual reading and research.

SECTION NINE – HEALTH AND SAFETY

The general teaching requirement for health and safety applies in this subject. We teach children how to work safely with tools, equipment and different materials. School risk assessments are in place for the use of certain types of equipment e.g. knives.

SECTION TEN – CHILDREN IN CARE (formerly Looked After Children)

As for all our pupils, Godinton Primary School is committed to helping every Child in Care (CIC) to achieve the highest standards they can. To this end staff will ensure that in delivering the curriculum they set suitable learning challenges of CIC, respond to the diverse learning needs of CIC, and help to overcome the potential barriers to learning and assessment for CIC. The science coordinator will support staff in doing this within this subject.

SECTION ELELVEN – EQUALITY, DIVERSITY AND INCLUSION

At Godinton Primary School, we are committed to ensuring equality of opportunity for all members of our school community irrespective of race, religion or belief, gender, gender reassignment, disability, sexual orientation, age, pregnancy or maternity, marriage and civil partnership or socio-economic background. We are determined to develop a culture of inclusion and diversity in which all those connected to the school feel proud of their identity and ability to participate fully in school life.

We tackle discrimination through the positive promotion of equality by challenging stereotypes and by creating an environment that champions respect for all. At Godinton Primary School, we believe that diversity is a strength that should be respected and celebrated by all those who learn, teach and visit us.

All school policies have an explicit aim of promoting equality and will be reviewed in terms of their contribution and effectiveness in achieving this aim.

SECTION TWELVE – MONITORING AND REVIEW

This policy is reviewed every two years.