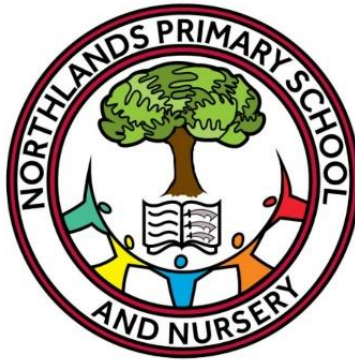


Northlands Primary School and Nursery



Science Policy

Ratified at the Full Governing Board meeting on _____

Signed _____

Due for review: November 2026

Northlands Primary School and Nursery Policy for Science



Inspire
Challenge
Succeed

Curriculum Intent

At Northlands Primary School & Nursery we believe that as educators of Science, we must strive to foster and develop an interest in the subject, in order to prepare our pupils for life in an increasingly scientific and technological world. In particular, we endeavour to embolden our students to pursue a scientific inquiry of the world around them, through scientific experimentation and investigation in the classroom. Furthermore, as staff we do our utmost to provide our children with the skills to present and communicate their findings in a variety of ways, as well as evaluate their answers. Children are taught to question theories and observations made and understand the importance of further research and development.

Aims and Objectives

- To help our pupils understand key disciplines of science: biology, chemistry and physics, through the accumulation of key foundational knowledge throughout the school
- To ensure our pupils are able to confidently demonstrate the skills required to allow them to work scientifically.
- To ensure even coverage of the 5 types of enquiry and to enable pupils to become independent scientists by choosing the most appropriate method of enquiry to solve a problem whereby they are able to design and carry out their own investigations.
- To ensure complete coverage of the National Curriculum for science as well as giving the children the opportunity to broaden their cultural capital and experience through workshops, investigations, themed weeks and visitors.
- To instil a love of science (and STEM) and a curiosity about the world around them.

Support for pupils with additional needs

At Northlands, we teach science to all children from EYFS to year 6, and all pupils are encouraged to make good progress in science regardless of their starting points or ability. Science forms part of the school curriculum to provide a broad and balanced education to all pupils. Pupils with additional needs are supported through personalised learning. This may come in the form of support in lessons; alternative, differentiated activities or the use of different equipment with which to carry out their investigations.

Internet Safety

One of the key types of enquiry that pupils undertake involves the use of secondary sources. This often involves the use of the internet. It is therefore important to ensure that pupils are responsible and safe users of the internet and communication technologies both inside and outside of school. As such, Northlands has an online safety policy which has been drawn up to protect all parties. Pupils also undertake weekly ICT lessons as well as covering online safety as part of their PSHE lessons which cover the rights and responsibilities of using the internet.

The Early Years Foundation Stage

In EYFS teachers plan using the “Development Matters” statements in the “Understanding the World” area of the Early Years curriculum along with the EYFS PLAN documents. Science is taught linked to topics, PSHE, outside play, social interaction in the classroom and stimulating activities and set play activities. Children are given lots of opportunities to undertake fun and stimulating investigations and experiments and are encouraged to ask questions about the world around them and how things work.

Science Curriculum

Year Group	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5
EYFS	Understanding the World				
Year 1	Everyday materials	Seasons	Animals including humans (animals)	Animals including humans (humans)	Plants
Year 2	Living things and their habitats	Everyday materials	Plants	What is a scientist?	Animals including humans
Year 3	Plants	Animals including humans	Rocks	Forces and Magnets	Light
Year 4	Living things and their habitats	Animals including humans	States of Matter	Electricity	Sound
Year 5	Earth and Space	Properties of Materials	Forces	Living things and their habitats	Animals including humans
Year 6	Living things and their habitats	Evolution and Inheritance	Light	Electricity	Animals including humans

*Working scientifically skills are taught and assessed throughout each unit and are planned as an integral part of every lesson.

Teaching and Learning

At Northlands Primary School & Nursery, teachers plan and deliver engaging science lessons that encompass a range of teaching and learning styles. We provide our pupils with the opportunities to:

- Develop positive attitude towards and high profile for Science and STEM at Northlands through practical, hands-on and engaging activities as well as high quality teaching
- Work collaboratively with their peers
- Think scientifically by planning and carrying out investigations with an increasing systematic approach as they progress through the school.
- Produce a variety of outcomes by recording their work in a variety of ways: writing, diagrams, graphs, tables etc.

- Understand what science is and what scientists do as well as the range of career options available through STEM routes.

Planning

Science in the Early Years Foundation stage is planned using the Early Years Curriculum “Understanding the World”. This is further supported through the use of the EYFS PLAN document. Key Stage 1 and 2 teachers plan science lessons using the National Curriculum (2014) as established in the whole school science curriculum map.

Science at Northlands is taught using a topic-based approach, with five topics spread across the three terms. The learning objectives to be covered for each topic can be found on the science progression document. There is also a vocabulary progression document to aid planning.

At Northlands, we do not use one resource as a scheme of work, but rather use the best parts of each scheme to create unique and engaging lessons for our pupils at Northlands while following the structure outlined for science lessons at Northlands. The Science Lead is responsible for ensuring that staff have access to high quality digital resources to enable this high quality planning.

All science lessons are to have a focused learning objective (LO), linked to the task and assessment criteria. A recap slide is included at the start of each lesson to allow pupils to understand the links within each unit and delve deeper into the science behind each topic as well as enhancing their ‘sticky’ knowledge.

Teachers should endeavour to include a practical activity / experiment / investigation in each science lesson. Where this is not possible, teachers should try to include a demonstration or video as a hook for the lesson.

Children are to be given either appropriate assessment/testbase questions (chosen to test knowledge of the previous lesson/lessons) or dive deeper questions where teachers seek to extend children’s learning (e.g. asking children to analyse a given set of results or asking them to suggest improvements for an experiment) a minimum 3 times per half term. This could be used as a starter to review a concept that was previously taught, as part of the children’s task for the lesson or could be used as a plenary. This should be marked in class to allow children to learn from misconceptions.

Teachers are required to complete a Topic plan (MTP) for each science topic stating the objective to be met, a hook/explorify video, a hands-on activity or investigation, task to be completed and how this will be recorded in the books and the plenary. Teachers are also required to identify which working scientifically skills are the focus each week and which type of scientific enquiry each lesson is covering. Teachers are required to keep their topic plans up to date. These should be used to aid them in planning activities and investigations throughout the year to ensure children are covering all types of investigations thoroughly.

“Working Scientifically” is embedded throughout the areas of learning in Key Stage 1 and 2, through the use of scientific investigation and enquiry within each unit of learning. Working scientifically should be embedded within all science topics throughout the year and not left as a stand alone topic for the last half term. Any remaining time in the sixth term will be dedicated to encouraging deeper investigation and use of scientific skills through a dedicated investigation unit to be taken from either the ‘Switched –on-Science’ scheme of work available through LGfL or through Developing Experts (an additional resource provided by the

school). This will allow teachers to plug any skills based gaps identified throughout the year but not covered during the given topics for the year.

Books and Marking

Children are encouraged to set work out methodically, clearly and neatly. We expect children to adhere to the high standards set by Northlands regarding handwriting and presentation and careful use of rulers for drawing lines and diagrams.

Work in science should be marked according to the school's marking policy. This includes giving a dive deeper sticker (1 per half term) and giving children the opportunity to work on these. Misconceptions should be addressed as soon as possible through mini-plenaries throughout the lesson and additional support, as necessary.

Spelling corrections should focus on scientific vocabulary. These should be marked in accordance with the marking policy.

Work recorded in books should be consistent across the year group.

Assessment

In EYFS teachers assess science against the "Development Matters" statements in the "Understanding of the World" area of the Early Years curriculum.

Key stage 1 and 2, teachers are to use AFL strategies for formative assessment to help inform their planning and teaching towards the pupils' gaps in knowledge. Teachers are to incorporate science assessment questions within their weekly science lessons and these, alongside the assessment grids are used to guide and assist teacher assessed levels.

Summative assessment of science at Northlands Primary School & Nursery occurs at the end of each unit (five per year) where children are identified as working *significantly below*, *working towards*, *moderately secure*, *strongly secure*, *above in some areas* or *significantly above* in this particular topic. This is based on teacher assessment of the child's knowledge of the science curriculum. Assessment results are to be recorded on the approved templates and saved to the shared Curriculum Assessments folder on 365.

In the spring term, Pupils will complete a formal written assessment to assist teachers with providing an attainment band/step (e.g. 3W) within their end of year report based on their understanding of the National Curriculum (2014) content and their ability to work scientifically. This is to be entered onto insight by a specified deadline to allow reports to be prepared. At the end of each school year, this attainment band/step is updated to reflect pupils' progress throughout the summer term and again, is to be recorded using the school's Insight program.

Staff Training and support

Staff are provided with regular opportunities for training in science with an annual CPD led by the Northlands Science Lead as well as regular opportunities provided by the MAT to attend externally provided additional CPD.

Staff are provided access to PZAZ, Developing Experts, Switched on Science and Twinkl to support their planning and for further development opportunities.

Monitoring:

Planning scrutinies and book looks will be carried out regularly by the science leader once per term as laid out in the science monitoring timetable. Pupil voice questionnaires will be carried out twice a year with the science leader. Any monitoring feedback will be given to teachers at an appropriate time by the science subject leader.

Science assessments will be analysed by the science subject leader at the end of the spring and summer terms. A breakdown of strengths and weaknesses, along with areas of focus for each year will be shared with SLT and teaching staff.

The Science Lead will also conduct drop-in lesson observations throughout the year to see how the lesson structure, methods of enquiry and working scientifically criteria are being embedded into each lesson.

Health and Safety

Teachers must plan safe activities for science and complete a risk assessment if necessary. Both teachers and teaching assistants need to be aware of health and safety procedures. Protective equipment such as gloves or goggles must be provided by teachers and worn by all pupils and staff when necessary. Teachers must also ensure to check the allergies register before using food in lessons. Teachers are provided with access to PZAZ which outlines safety procedures for various experiments and how to safely conduct these in a classroom environment.

Resources

Science resources are stored in the science cupboard. They must be cleaned and returned to the correct storage box after use. All resources should be returned to the science cupboard when not in use as some topics are taught by more than one year group (e.g. electricity). Staff members are expected to check their resources are available ahead of their lesson and to inform the science leader in good time if an order for equipment needs to be placed.

Linked policies / documents: