NEWLANDS JUNIOR SCHOOL

Newlands Junior School
We are Proud

Science Policy September 2025

Rationale

"A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes." National Curriculum (2014).

Science in our school provides opportunities for children to develop their knowledge and understanding of the world in which they live, both through practical experience and from other sources of information.

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability.

Aims

At Newlands Junior school our high quality Science educations aims to:

- Prepare our children for life in an increasingly scientific and technological world.
- Foster concern about, and actively care for, our environment.
- Help develop and extend our children's scientific concept of their world.
- Develop our children's understanding of the international and collaborative nature of science.
- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- Develop understanding of the nature, processes and methods of science through different types of scientific enquiries that help our children answer scientific questions about the world around them.
- Equip children with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Adaptive Teaching

The National Curriculum provides a broad and balanced education for all children. Throughout all teaching and learning at Newlands, we provide opportunities that enable all pupils to make good progress. We do this by setting suitable challenges and responding to each child's individual needs, as well as choosing activities to suit each year group and lesson. Teaching is adapted to meet the needs of all pupils. Appropriate support, whether adult support or the use of manipulatives or other extra learning resources, is given to any child that needs it to move their learning forwards.

Spoken Language

The National Curriculum for Science reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their scientific vocabulary and articulating scientific concepts clearly and precisely. They must be assisted in making their thinking clear, both to

themselves and others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Attitudes

- Encourage the development of positive attitudes to Science and build on children's natural curiosity.
- Encourage open-mindedness, self-assessment, perseverance and responsibility within all Science units, embedding this into working scientifically objectives.
- Provide our children with an enjoyable experience of Science, so that they will develop a deep and lasting interest and may be motivated to study science further.
- Build on our children's natural curiosity and help them to develop a scientific approach to problems.
- Build our children's self-confidence to enable them to work independently.
- Develop our children's social skills to work collaboratively with others.

Skills

- Provide sticky knowledge and key vocabulary for students, supported by our curriculum progression document. Opportunities to re-visit these are built upon within the classroom.
- Give our children an understanding of scientific processes and acquire the necessary working scientifically skills.
- Help our children to acquire practical scientific skills.
- Develop the skills of investigation - including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Develop the use of scientific language, recording and techniques.
- Develop the use of ICT in investigating, recording and presenting.
- Enable our children to become effective communicators of scientific ideas, facts and data, including those of famous people.

Teaching and Learning at Newlands

Science teaching at Newlands is about excellence and enjoyment. Planning for science is a process in which all teachers are involved to ensure that the school gives full coverage of the programmes of study for Science in The National Curriculum (2014).

The development of spoken language is a critical part of every Science lesson and teachers ensure that all children are consistently exposed to scientific language. This is nurtured by encouraging children to talk about and explain the science they are learning with each other, as well as their teacher.

Our Science curriculum will:

- Allow opportunities to work scientifically on a half term basis, creating and investigating scientific enquiries.
- Where appropriate, encourage all teaching staff to develop their knowledge and skills in the teaching of science and have the opportunity to develop these skills further by attending CPD courses.
- Provide a range of stimulating and scientific opportunities which create a framework for success and enjoyment, thus enhancing self-esteem.

- Provide all children with the cultural capital needed to be equipped with Science skills, knowledge and values which they can apply to support them in being at the forefront of education as they progress through adult life.
- Make links within the teaching of Science to the personal development of children, encouraging them to support the local community by showing respect for cultural diversity and accepting differences in the world around them.
- Showcase a clear coverage (supported by our Whole School Overview) and detailed coverage through topic planners which are monitored regularly against skills progressions.
- Explore famous people wherever possible which are linked into the Science curriculum, supported by the curriculum progression document.
- Keep parents and carers informed about their child's education through knowledge organisers which will be created for each overall topic and shared with children and parents in homework books and on the school website, in order to extend learning outside of the classroom

Enrichment Activities

- Wherever possible, the teaching and learning of science is enhanced by educational visits using the local area as a resource or visitors to the school.

- Science week helps to raise the profile of science in school and allows the children to experience a range of exciting activities and mini projects.

- Opportunities to take part in Science as an extra-curricular activity, supports positive attitude and enthusiasm for the subject.

Health and Safety

It is important that children are taught the rule of safety in Science from a young age so that it becomes integral to their experiments and investigations. Materials and equipment need to be treated with respect and care and we endeavor to make sure all children do this. When carrying out scientific activities, children should treat their classroom as though it is a fully equipped science laboratory.

Equal Opportunities

Science is planned to meet the varied needs of all learners regardless of their gender, background, and culture, physical or cognitive development. Learning objectives are set to meet these needs in line with our Special Needs policy. Our expectations do not limit pupil achievement and assessment does not involve cultural, social, and linguistic or gender bias. We recognise that Science may strongly engage our gifted and talented children, and we aim to challenge and extend them.

Use of ICT

We use ICT in science wherever possible. Children are given the opportunity to practice science skills and enhance their presentation using carefully-chosen software, as well as the Internet. ICT equipment is used for enquiry work or to record findings.

Links with other subjects

In our topic-based teaching approach, we use cross-curricular links to Science wherever we can. Science relates especially well to curriculum subjects such as English, Mathematics, ICT and Design and Technology.

Personal Development

It is vital that personal development becomes integral to children's learning of scientific ideas and concepts, allowing them to develop a natural curiosity.

Our Science curriculum helps in developing responsible, respectful and active citizens who are able to play their part and become actively involved in public life as adults through scientific learning. Science supports developing pupils' character, which we define as a set of positive personal traits, dispositions and virtues that informs their motivation and guides their conduct so that they reflect wisely, learn eagerly, behave with integrity and cooperate consistently well with others. This gives pupils the qualities they need to flourish in our society and is supported by regular working scientifically opportunities within the classroom.

Records and Assessment

Pupils will be encouraged to reflect upon their work as individuals, in class groups and through self-assessment as appropriate. Teachers will use formative assessment throughout each Science topics. At the end of each term teachers will make summative assessments of the attainment and progress made by pupils, against the National Curriculum. This will then be entered on a tracking grid for the subject leader to monitor throughout the year. At the end of each year, this will be reported to parents and carers.

Monitoring of Science

- Standards in Science across the school are monitored through lesson observation, pupil voice, work sampling and evaluation of planning.
- Reviewing the Science action plan takes place on a regular basis, updating actions throughout the year.