



Science Policy

Date of policy	February 2024
Member of staff responsible	P Miles
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Science at Norwich Road Academy

Norwich Road Academy gives pupils a very high-quality offer in the subject of Science and this has been ratified by the recent earning of the PSQM - Primary Science Quality Mark. The PSQM is a comprehensive evidence-based professional development programme that effectively develops Science leadership, ensuring teachers have the knowledge, capability and support they need to transform science education and shape future generations.

The Primary Science Quality Mark is led by the University of Hertfordshire.

Helen Sizer (of The University of Hertfordshire) the PSQM Co-Director said: *'By enabling effective science leadership, PSQM is powering the potential of all children to see the relevance and importance of science in their lives, now and in the future. Schools that have achieved a Primary Science Quality Mark have demonstrated a significant commitment to science leadership, teaching and learning and the profile and quality of science in each accredited school is very high. Science subject leaders, their colleagues, headteachers, children, parents and governors should be very proud.'*

Intent:

To provide children with a high-quality Science Curriculum which will inspire children, and promote a love of Science learning, not only in the primary years, but also through high-school and beyond to further and higher education, and into the world of work. Children will be well-versed in Scientific themes, skills, approaches, knowledge and vocabulary linked to a wide range of physical, biological and chemical themes. In addition, links are made between subjects (such as Science, PE and Life Skills – The Human Body, Healthy Living and exercise) during the school year. This approach helps to deepen children's understanding in all subjects.

All of this will be supported by the Norwich Road values of:

- **Empower-Motivate-Aspire-Transform-Be Proud-Connect**

Implementation:

Teaching Science at Norwich Road Academy is investigative, experimental and practical. We aim to promote the love of questioning and research, allowing children to think and work scientifically – to know more and remember more. In order for this to be achieved, teacher subject knowledge is crucial. This begins with Continuous Professional Development. The

PSQM shows that the subject leader has attained a high level of subject knowledge, and this has been cascaded to teaching staff to ensure they have the skills and the desire to put our vision into practice. We also follow faithfully a knowledge-based curriculum designed by PKC (Primary Knowledge Curriculum) which ensures that not only learning is continuous - building upon previous knowledge, but also broad, ensuring full coverage of the National Curriculum's objectives. In addition, the planning provided by PKC provides not only the links to previous learning, but all background knowledge required along with the scientific vocabulary required for each and every lesson so children can become experts. High quality teaching also requires resourcing, and our teachers have access to a vast range of equipment which is well organised and easily available. Finally, our long-term plan allows links between units, so that phases can link up with certain topics such as 'The Human Body.' This means knowledge can be shared between classes across the age ranges, and children can even discuss their learning at home with siblings.

SEND and Inclusion

At Norwich Road Academy, we endeavour to meet the needs of all children, taking into account gender, ethnicity, culture, religion, language and disability. The provision for children with Special Educational Needs and Disabilities is detailed in the SEND Policy. Children with SEND are supported through additional or adapted resources, differentiated learning tasks, targeted adult support and interventions. Some children may need additional time or careful scaffolding to understand or complete a task.

Impact:

The Science curriculum will have an impact on the children we teach as it will help to promote enquiry and allow them to discover the 'how' and 'why'. By participating in regular practical experiments, children will be able to respond and write accurate reports, create predictions and hypothesise, make links to previous knowledge and analyse data which will lead to clear conclusions. At the end of each unit, a comprehensive summative assessment will be carried out to quantify understanding and ensure that children are able to be graded because of their Scientific skills and knowledge without reliance on literacy. In addition, pupils will gradually build the skills needed to plan their own investigations in line with our Scientific Enquiry expectations which build year on year (see appendix 1.) This will ensure that children are not only fully capable of planning and carrying out meaningful investigations, but they move to high-school ready to take on the challenges of KS3 Science in fully-functioning High School Science laboratories.

Subject Leader

Subject Leaders at Norwich Road Academy will:

- Prepare and review subject policy and curriculum plans
- Promote the study of the subject throughout the academy
- Advise and support staff in the planning, delivery and assessment of design and technology;
- Monitor and evaluate the standards of children's work and the quality of teaching in design and technology throughout the school;
- Attend appropriate CPD and stay informed regarding developments within their subject
- Provide and evaluate learning resources
- Provide training and CPD to staff on the subject curriculum and its delivery, and keep them informed about subject developments nationally
- Assess the impact of the subject curriculum on pupil's learning and development

Monitoring and review

This policy will be reviewed by staff and governors at least every 2 years.

Appendix 1

Scientific enquiry skills: minimum expectation per year-group.

Year-group	Skills which should be secured by the end of the Summer term:
EYFS	Predictions, discussion of results.
Year 1	Predictions, fair-test, recording / discussion of results, conclusion.
Year 2	Predictions, fair-test, method, recording / discussion of results, conclusion.
Year 3	Predictions, fair-test, method including diagram, recording / discussion of results, conclusion, evaluation.
Year 4	Hypothesis, predictions, fair-test, method including diagram, recording / discussion of results, conclusion, evaluation.
Year 5	Hypothesis, predictions, fair-test, method including diagram, recording / discussion of results, presentation of results, conclusion, evaluation.
Year 6	Planning an investigation, hypothesis, predictions, fair-test, method including diagram, recording / discussion of results, presentation of results, conclusion, evaluation.

Blue font - New skills

Green font - Skills secured in previous years / phases