



Science Intent and Policy

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Norwich Road Academy Curriculum Intent - Science

Intent

Science is a systematic investigation of the physical, chemical and biological aspects of the world which relies on first hand experiences and on other sources of information. The scientific process and pupils' problem-solving activities will be used to deepen their understanding of the concepts involved. The main aspects of science to be studied will be determined by the programmes of study of the new EMAT Curriculum (2021).

Through science pupils at Norwich Road Academy will continue to deepen their respect, care and appreciation for the natural world and all its phenomena.

These values are central to our Academy vision:

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

Aim

- to develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life (empower, connect and motivate);
- to build on pupils' curiosity and sense of awe of the natural world (connect and be proud);
- to use a planned range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of science (motivate, empower, transform and aspire);
- to introduce pupils to the language and vocabulary of science (transform, aspire and motivate);
- to develop pupils' basic practical skills and their ability to make accurate and appropriate measurements (connect);
- to develop pupils' use of computing in their science studies (connect);
- to extend the learning environment for our pupils via our environmental areas and the locality (connect);
- to promote a 'healthy lifestyle' in our pupils (empower, motivate and be proud).

Objectives

These objectives are based from the above aims, which we hope that all children by the time all pupils leave Norwich Road Academy will have achieved these objectives. EYFS objectives differ slightly as they follow ELG.

EYFS Objectives

The EYFS objectives will follow: ELG: 05 Health and Self-Care and ELG 14: The World.

This part of the EYFS curriculum that allows children to understand the world around them and investigate changes, not only in themselves but also the environment that they live in:

- Children know the importance for good health of physical exercise and a healthy diet, and talk about ways to keep healthy and safe;
- Children know about similarities and differences in relation to places, objects, materials and living things;
- They talk about the features of their own immediate environment and how environments might vary from one another;
- They make observations of animals and plants and explain why some things occur, and talk about changes.

Key Stage 1 and 2

Pupils will be involved in a variety of structured activities and in more open-ended investigative work:

- activities to develop good observational skills
- practical activities using measuring instruments which develop pupils' ability to read scales accurately
- structured activities to develop understanding of a scientific concept
- open ended investigations.

On some occasions pupils will carry out the whole investigative process themselves or in small groups.

To build on pupils' curiosity and sense of awe of the natural world

- to develop in pupils a general sense of enquiry which encourages them to question and make suggestions

Assessment will also be related to these objectives:

- to develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life.

- to develop a knowledge and appreciation of the contribution made by famous scientists to our knowledge of the world including scientists from different cultures
- to encourage pupils to relate their scientific studies to applications and effects within the real world
- to develop a knowledge of the science contained within the programmes of study

Implementation

Teaching Science at Norwich Road Academy should be investigative, experimental and practical. We aim to promote the love of questioning and research, allowing children to think and work scientifically. We shall be using Scientific resources to promote enquiry but also to complete as many investigations and experiments as possible. Teachers will be using the EMAT curriculum as a guide to inform teaching. This will be evident within long term and medium term planning. Teachers can then use different schemes from multiple sources to ensure the delivery of high quality learning experiences for their pupils. The freedom to choose and select from multiple sources will give teachers access to a variety of resources to ensure correct and accurate delivery of the EMAT curriculum.

Impact

Throughout the school teachers will assess whether children are working towards/working at/above the expected level for their age on Pupil Asset. This will need to be completed after each unit of work. The judgement will be purely based on teacher assessment which will be based on their understanding and application of the content of EMAT Curriculum (2021).

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'. This will then have an impact on other aspects of the curriculum. By participating in practical experiments, children will be able to respond and write accurate reports, create predictions and hypothesis, recap on previous knowledge, promoting good literacy skills and analyse data which will help with promoting maths skills.