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# Science Policy

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September 2021

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To be reviewed  
September 2023

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# Science Policy

## Introduction

This policy outlines the teaching, management and organisation of science at St. Nicholas-at-Wade CE Primary School.

Science is:

***“the intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiment”***

*Definition from Oxford English Dictionary*

## Mission Statement

At St. Nicholas –at – Wade we believe that all pupils deserve and need a fully rounded curriculum to become confident, independent lifelong learners. Science has a crucial role in this and is considered a vital part of our pupil’s experience in school. As such, all pupils are given opportunities to participate in activities across the disciplines of biology, chemistry and physics during their time in school in line with the National curriculum (2014). In addition to this children are given regular opportunities to transfer and build on prior knowledge to their long term memory through carefully sequenced lessons.

Knowing more, remembering more:

***“Learning can be defined as an alteration in long-term memory. If nothing has altered in long-term memory, nothing has been learned...pupils connect new knowledge with existing knowledge.”***

*Ofsted*

## Key Aims and Objectives:

Aims	Objectives
<b>1. To use a variety of teaching strategies to give pupils an increasingly secure understanding of the concepts and knowledge of science.</b>	<ul style="list-style-type: none"><li>❖ To plan for whole class/small group and individual learning activities during science lessons.</li><li>❖ To use research, practical activities and demonstration to further scientific knowledge.</li></ul>
<b>2. To ensure all pupils develop and use the skills of science</b>	<ul style="list-style-type: none"><li>❖ Activities will be planned for pupils to ensure they learn and use the skills of observing, identifying, classifying, comparing, predicting, estimating, measuring, testing, experimenting, fair testing communicating and drawing conclusions.</li></ul>

<p><b>3. To stimulate pupils' interest and curiosity in the world around them by creating awe and wonder.</b></p>	<ul style="list-style-type: none"> <li>❖ Plan for practical, hands-on science activities where possible.</li> <li>❖ Take pupils out of the classroom on a regular basis to experience science activities in the real world.</li> <li>❖ Provide children with opportunities to experience the work of professional scientists through visits to organisations, museums, workshops with scientists and other partnerships at least twice at each key stage (available from STEM ambassadors).</li> </ul>
<p><b>4. To help pupils understand the language and specialist vocabulary of science and to use technical terminology accurately and precisely.</b></p>	<ul style="list-style-type: none"> <li>❖ Ensure that pupils are taught specific science vocabulary associated with each topic and that a word bank is provided to scaffold learning.</li> <li>❖ Expect pupils to use taught vocabulary in their recording of their scientific learning.</li> </ul>
<p><b>5. To give pupils the opportunities to develop methods of systematic enquiry</b></p>	<ul style="list-style-type: none"> <li>❖ Using carefully sequenced lessons planned from Curriculum Maestro.</li> </ul>
<p><b>6. To track pupil progress in science to inform future learning opportunities.</b></p>	<ul style="list-style-type: none"> <li>❖ Use teacher assessment to track pupil progress on Cornerstones Maestro.</li> <li>❖ Use informative feedback following assessment and allow pupils time to respond to this feedback to ensure progress (orange pen work / verbally).</li> <li>❖ Essex target tracker is updated once a year with assessment overview from Cornerstones Maestro.</li> </ul>
<p><b>7. To celebrate pupils scientific work and achievements.</b></p>	<ul style="list-style-type: none"> <li>❖ To use examples of science work to celebrate in assembly</li> <li>❖ Each classroom will have a display or working wall dedicated to topic activities, which will include science work and vocabulary.</li> <li>❖ Teachers may invite parents in during the 'Express' stage to showcase the children's work.</li> </ul>

## Curriculum

The school has adopted Cornerstones Maestro as the basis of our science curriculum in school. The tasks from Cornerstones Maestro should be used, but can be adapted to suit the class. Additional resources to compliment learning can be sourced from the Kent Scheme of Work by Andrew Berry and STEM Kent resources and the skills of their ambassadors. In addition to this, further resources and videos can be used from the BBC and YouTube. Skills, concepts and

knowledge will always relate to the national curriculum and suggestions have been made to teachers about how the science can be taught through specific Cornerstones topics so that the children's learning is cross curricular and full coverage is met throughout the school. Each year group will cover units of work, over a two-year rolling cycle, as shown in our '*Science Long Term Plan*'.

A cross curricular approach is encouraged where possible so pupils will experience science through literacy (reporting and recording), history (the work of influential scientists over time), geography (science of geology, habitats and other earth sciences), mathematics (accurate measuring, and data recording) and Computing.

## **Assessment**

Formative: Teachers will continually assess pupil's progress and understanding during and after lessons, this will be through observation, discussion with pupils and marking of work. Pupils will have opportunities to respond to marking in their books. Assessment can also be recorded in the class big books, where practical investigations are displayed using photos and annotations.

Summative: Teachers may devise an end of unit quiz/test to ascertain pupils understanding. At the end of each session, teachers should assess the lessons on Cornerstones Maestro using the skills and understanding objectives covered. At the end of each academic year, pupils attainment in science will be recorded on Essex Target Tracker from an overview created in Curriculum Maestro.

## **Resources**

All the main practical science resources are based in the Meerkat room. These resources should be kept neat and tidy. Any missing or damaged resources should be reported to the subject leader immediately, so they can be replaced.

## **Health and Safety**

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class Teachers and Teaching Assistants should report any damage to the subject leader and defective equipment should be taken out of action. The school has adopted the ASE book 'Be Safe' as its model risk assessment and therefore this should be consulted when necessary. If an activity is not covered by 'Be Safe' then we will contact CLEAPSS (School Science Service Helpline 01895251496) for further advice.

## **Equal opportunities**

All pupils will have an equality of access to a broad and balanced science curriculum irrespective of gender, ethnicity or special educational needs.

## **Additional Educational Needs/Special Educational Needs**

All pupils will have access to the full National Curriculum for science. Pupils with specific learning difficulties and disabled pupils will be provided with modified learning programmes, resources and equipment appropriate to their needs. For most pupils curriculum access will be enabled through the use of modified teaching methods and the deployment of learning support assistants.

This policy should be read in line with our Teaching and Learning policy and Subject leader job description.

**Written By: Miss Natasha Norris (September 2021)**

**Reviewed By: Mrs Heather Kemp (September 2021)**

**To be reviewed: September 2021**