



Science Position Statement

The Science curriculum intent is to develop and inspire natural curiosity of a variety of phenomena and to develop independent investigators of the world around us.



Attainment

Early data for summer 2022 indicates that, in those classes accessing discrete science teaching, 100% of classes achieved 70% of their pupils meet or exceed their targets for science.

Classes use annotation boxes to assess their attainment in each session (see example), these include clear next steps as well as the objectives the children have been working from, helping support children with their progress.

<b>Objective:</b> <b>Intent:</b> <b>Implementation:</b>	<b>Date:</b>
<b>Impact</b> <b>Next Steps:</b>	
<u>Level of Engagement</u> 1... 2... 3...4 ...5 <u>Achieved:</u> -    ✓    +	<div style="border: 1px solid black; display: inline-block; padding: 2px 10px;">Staff:</div> <div style="font-size: small; padding: 2px 10px;">                 Support coding: NS ~ no support / VP ~ verbal prompt / M ~ model / SP ~ signed prompt / PP ~ physical prompt / SU ~ symbols used             </div>

## **Curriculum**

The curriculum aims to explicitly teach a variety of scientific skills across a range of themes. The curriculum delivered on a two-year rolling programme, with the themes being taken from the National Curriculum. Science is planned around a scheme of work produced within school. The scheme was introduced in the academic year 2021-2022 year and incorporates relevant scientific skills into each of the planning grids for the topics; as well as incorporating the 5 types of scientific enquiry.

The curriculum aims to teach skills that meet the range of all our pupils needs e.g. from a pre-formal curriculum to those working at national curriculum levels.

Teachers carefully plan based on children's individual needs, and ensure that all needs are met. Where appropriate, SALT and OT strategies such as communication boards or sensory exploration are embedded within the curriculum.

All children accessing the Science curriculum have a sheet to track their progress in the topics/themes covered and ensure a range of coverage when the children revisit the same topics as part of the 2-year cycle. This tracking sheet also allows teachers and senior leaders to track progress and attainment.

### Year 1

<b>Chemistry Focus – Autumn</b>	<b>Biology Focus – Spring</b>	<b>Physics Focus – Summer</b>
Everyday Materials and their uses	Animals, including humans	Forces and magnets
Properties and changes of materials	Plants	Sound
Look at Seasonal Changes/weather throughout the year when appropriate		
<b>Working Scientifically: All Science areas should link to the Scientific Skills document</b>		

## Year 2

<b>Biology Focus – Autumn</b>	<b>Chemistry Focus – Spring</b>	<b>Physics Focus – Summer</b>
States of Matter	Evolution and Inheritance	Electricity
Rocks	Living things and their Habitats	Light
Look at Seasonal Changes throughout the year as appropriate		
<b>Working Scientifically</b>		

**Planning**

A new planning document supports teachers to plan appropriately and include a range of Scientific skills with Scientific content including using the 5 types of enquiry throughout their planning.

Teachers plan using a wide range of approaches including, where appropriate, therapy approaches e.g. communication boards, symbols, devices and sensory opportunities to access the learning, where appropriate.

Staff group their pupils to suit the needs of the pupils and the needs of the task e.g. academic ability or children who work well together.

Questioning is scaffolded carefully, with additional support used to enable all pupils to access this, where needed/possible e.g. symbols.

(Evidenced on the learning walk)

Those pupils in the EYFS stage of their learning journey follow the Understanding the World curriculum, which incorporates science objectives. Those pupils working on the pre-formal curriculum access topic learning which incorporates science related learning.

**Subject Knowledge**

During previous academic years, teacher subject knowledge has been considered to be a strength of the school. This was evidenced through a variety of forms of monitoring such as learning walks and book looks. During these forms of monitoring, teachers were observed to be using the 5 types of scientific enquiry within their sessions

Teaching assistants displayed their subject knowledge and understanding of the subject by asking a wide variety of questions to further develop the pupil's knowledge and understanding.

A good subject knowledge base supports teachers around school to be able to tailor their teaching to meet the needs of their pupils. For example, understanding resources that can be used to meet the needs of a child who requires sensory input within their learning.

During the academic year 2022-2023, there has been a number of changes within the staffing structure which could have an impact on the overall picture of subject knowledge. These changes include 4 ETCs and 3 staff moving from EYFS to pre-formal curriculum. This includes a change to the Science HUB lead. The Science HUB recognise the need to re-evaluate the strength of subject knowledge across the school and offer support, as required.

This support includes up-skilling the new Science lead via local authority courses/support networks etc.

### **Assessment and Target Setting**

A new planning tool has been developed and implemented, which supports staff with setting appropriate targets. A new assessment tool is being used, with the first data collection in October 21. The assessment tool allows those pupils working on the formal curriculum to be assessed and tracked to UKS2 levels. All teachers/staff record informal assessments during sessions using annotation boxes which include clear next steps for learning.

Those pupils working on the pre-formal curriculum are assessed using a different curriculum/set of objectives. Their progress is tracked on Tapestry.

### **Monitoring**

The Science HUB uses a variety of tools to monitor the subject, such as, book looks, observations and learning walks.

Staff feedback will enable the HUB to understand how successful the new planning tool is and whether any adjustments are required.

Learning walks including a book look were undertaken in 2021. These sorts of activities have been successful in developing the HUB's understanding of what Science looks like around school including awareness of levels that the children are working at and how different classes access Science.

### **Resources**

At the main site, there is a bank of central resources for each of the Science themes that all classes can access when appropriate. The resources are audited on a regular basis.

**Key issues for improvement**

- To embed the planning and assessment cycle consistently across all classes following the formal curriculum.
- To ensure high quality resources are available across the school.
- To support the professional development of staff who are less experienced teaching science

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