

OPENING  
DOORS



OPENING  
MINDS

## ***THE SPIRES FEDERATION***

*Our core values are: SUCCESS, HAPPINESS, INSPIRATION, NURTURE, EVERYONE*

Our Mission is: **To provide an aspirational education which inspires all in our community so that they are happy, confident and equipped for life in all its fullness.**

## **MATHEMATICS POLICY**

CURRICULUM DRIVERS	<b>Aspiration</b> <i>Opportunities for all to succeed and be the best they can be.</i>	<b>Worldly Wise</b> <i>Awareness and respect of the wider world and the people within it.</i>	<b>Well-being</b> <i>Nurturing all to be healthy and happy.</i>
SUBJECT INTENT	The <b>INTENT</b> of our mathematics curriculum is to ensure that all children have success in developing mathematical knowledge and skills so that they know more and remember more and that all are best prepared for the next stage of their education and for life. We recognise that thinking mathematically is a life skill and without the successful teaching of mathematics in education we severely limit the opportunities available to our pupils and for this reason mathematics is held with such prominence and taught with enthusiasm across the Spires Federation.		

	High Expectations	Modelling	Research/Evidence	Vocabulary
Underpinned by	Through high quality CPD, a carefully planned curriculum and subject monitoring, staff have an excellent understanding of the expectations for the subject and the children rise to this.	<p>To the children: Through quality first teaching, staff model key concepts to the children by</p> <ul style="list-style-type: none"> <li>• Providing an example;</li> <li>• Exploring thinking – teachers/Tas and the pupils;</li> <li>• Demonstrating the process;</li> <li>• Working together through the example;</li> <li>• Providing prompts (or scaffolds) as appropriate;</li> <li>• Providing an opportunity for pupils to work themselves (alone or in pairs) – independent and shared mathematical thinking</li> <li>• Drawing out the key learning.</li> <li>• Show examples and non-examples</li> </ul>	<p>Ofsted Maths Research Review – (May 2021)  <a href="https://www.gov.uk/government/publications/research-review-series-mathematics/review-series-mathematics">https://www.gov.uk/government/publications/research-review-series-mathematics/review-series-mathematics</a></p> <p>Improving Mathematics in Early Years and KS1 – EEF Guidance report (January 2020):  <a href="https://educationendowmentfoundation.org.uk/tools/guidance-reports/early-maths/">https://educationendowmentfoundation.org.uk/tools/guidance-reports/early-maths/</a></p> <p>Improving Mathematics in Key Stages 2 and 3 – EEF Guidance report (November 2017):  <a href="https://educationendowmentfoundation.org.uk/tools/guidance-reports/maths-ks-2-3/">https://educationendowmentfoundation.org.uk/tools/guidance-reports/maths-ks-2-3/</a></p> <p>NCETM website:  <a href="https://www.ncetm.org.uk/news-features/">https://www.ncetm.org.uk/news-features/</a></p>	<p>Mathematics Glossary for Teachers from KS1 to KS3:  <a href="https://www.ncetm.org.uk/media/hpihri3s/national-curriculum-glossary.pdf">https://www.ncetm.org.uk/media/hpihri3s/national-curriculum-glossary.pdf</a></p>
<p><b>Implementation</b></p> <ul style="list-style-type: none"> <li>• The curriculum is exciting and ambitious, igniting curiosity and enabling the children to have a secure and deep understanding of mathematical concepts through small steps.</li> <li>• We supplement high quality teaching with the White Rose Maths (WRM) mixed-age planning; this has been a decision that is based on research during the 2019-2020 academic year, using the EEF Implementation Guidance and through our work with the East Midlands MathHub.</li> </ul>				

- The WRM progression documents and calculation policy help to inform the teachers of the journey of the child’s mathematical understanding in the mixed-age settings and also the appropriate representation or strategies to be taught.
- Teachers in KS1 and KS2 use ‘Flashback Four’ daily from WRM, which is the opportunity for the children to revisit questions and concepts from earlier in the academic year.
- ‘Minute Maths’ has also been introduced upon the children’s return from lockdown, when teachers found that stamina in mathematics was lacking. The use of the University of Cambridge’s ‘NRich’ website is also used to complement WRM as a high quality resource in developing reasoning and problem solving skills.
- Each classroom has manipulatives that are independently accessed by the children.
- Each classroom has a maths working wall, which includes: the area of mathematics being taught, key vocabulary, key representations and worked examples.
- There is a number line on display in each classroom with number size appropriate to the programmes of study for the year groups. Teachers use a counting stick to teach multiplication tables.
- Rapid recall of known multiplication facts is supplemented by the implementation of TT Rockstars

**SEN**

- Work is carefully matched to the ability of the individual pupil needs. Adult support is provided where required to support pupils in their acquisition of knowledge and application of skills whilst also developing their independence.

<b>IMPACT</b>	<p><b>PUPIL VOICE</b> Pupils speak with a passion for mathematics, demonstrating a deep understanding of the key knowledge, skills and concepts taught.</p>	<p><b>EVIDENCE IN KNOWLEDGE</b>  <b>Skilful use of Formative and Summative assessment used to identify gains and gaps in mathematical knowledge – this is used to identify next steps.</b></p>	<p><b>EVIDENCE IN SKILLS</b>  <b>Skilful use of Formative and Summative assessment used to identify gains and gaps in mathematical skills through reasoning opportunities– this is used to identify next steps.</b></p>	<p><b>OUTCOMES</b>  ‘Some subjects, including mathematics and physical education (PE), are well sequenced. They set out what</p>
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	<p><b>INCLUSION</b> Our inclusive curriculum ensures that struggling pupils are supported in a number of ways – the work may be differentiated by task or they may be given the same tasks but with more time and appropriate support.</p> <p>Same day intervention takes place to give to support to children by either the class teacher or teaching assistant.</p>	<p>Knowledge is revisited regularly, building on previous learning, through intelligent curriculum design.</p> <p>Pupils use core mathematical methods rather than allowing them to rely on guesswork or use “unstructured trial and error”. A method of calculation that relies on derivation may be useful in the short term, but the absence of learning core knowledge meant pupils “may rely too much on estimation and looking around for clues, or they may develop the habits of guessing and copying”. Teachers help pupils develop their automatic recall of core knowledge rather than allowing them to rely on derivation or guesswork. (Ofsted; May 2021)</p>	<p>Focus on CPD for staff continues, with collaborative planning between teams and support in the Sustaining of Mastery programme from the MathsHub</p> <p>Teachers close the ‘school entry gap’; These gaps are “not necessarily the outcome of natural ability or a different developmental pathway”, Ofsted said, but rather “it can be an indication of parental input and early exposure to the basics in mathematics in the home” (Ofsted, May 2021).</p>	<p>pupils should know and remember.’</p> <p>Ofsted Nocton Nov 21</p> <p>Termly Pupil Progress Meetings evidence that the great majority of pupils are making at least Expected progress, with some making Accelerated progress. The small percentage who are making LESS THAN EXPECTED progress have been identified and actions put in place to help them Catch Up and then Keep Up.</p> <p>Ofsted said that frequent “low-stakes” testing of taught content helps prepare pupils for final exams by “providing memory-enhancing opportunities to recall and apply taught content”.</p> <p>If teachers provide “honest feedback” then pupils’ interest will also increase. The watchdog said a high-quality maths curriculum would incorporate time testing within lessons to help pupils learn maths facts automatically.</p>
<b>MONITORING</b>	<p><b>Data</b></p> <p>3 x data collection points per academic year, using Rising Stars test papers.</p>	<p><b>Books</b></p> <p>Book scrutiny with specific focus each half term, carried out by subject leaders. Autumn 1: wb 18.10</p>	<p><b>Planning</b></p>	<p><b>Observation</b></p> <p>At least Termly learning walks</p>

	Further supported by Pupil Progress Meetings that focus clearly on the progress and attainment of individual pupils and identification of their next steps.			
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