



Mathematics Curriculum

Curriculum Intent

At Farnsfield St Michael's we aim to create well-rounded individuals who flourish and celebrate life in all its fullness. Our vision is to provide high quality teaching and learning of mathematics to teach children how to make sense of the world around them, and to achieve personal fulfilment as they master the knowledge and skills of mathematics. Our school values are at the heart of our learning.

By developing their ability to calculate, reason and solve problems, we will provide a foundation for understanding the world. Mathematics is essential to everyday life, critical to science, technology, and engineering, and necessary for financial literacy and most forms of employment. We also endeavour to inspire pupils of the beauty and power of mathematics, and to engender a sense of enjoyment and curiosity about the subject.

At Farnsfield St Michael's, children are encouraged to make mistakes in a safe and supportive environment, to work collaboratively, with respect for each other's ideas. They are supported to discuss these misconceptions with their peers and staff alike. Use of appropriate vocabulary is modelled throughout lessons by both staff and children, allowing everyone to 'talk like a mathematician'. Once a child can articulate their understanding of a concept, they can truly begin to make connections within their learning.

At our school, most children will be taught the content from their year group only. They will spend time becoming true masters of content, applying and being creative with new knowledge in multiple ways. We are on the same path, no matter our starting point, and work collaboratively to fulfil our full potential.

We aim for all pupils to:

Become **fluent** in the fundamentals of mathematics, so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. including the varied and regular practice of increasingly complex problems over time.

Reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.

Can **solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions – including unfamiliar contexts and real-life scenarios.

We follow the National Curriculum, which sequences and structures the teaching into the year groups. To ensure this curriculum is covered in full and in manageable and logical steps, we follow the long-term plans from the White Rose resources.

We also utilise, and share high quality resources from various platforms, picking the most impactful strategies and materials, to produce a bespoke and coherent curriculum for our pupils.

We enhance our classroom-based learning through visits, whole school theme days and resources from outside of school such as Magical Maths and our subscription to TT RockStars.

Curriculum Implementation

	EYFS	Year 1 - 6
Pedagogical Approach and Strategies	<p>EYFS to follow Development Matters with topic related lessons providing coverage of key areas of mathematics defined by the Early Learning Goals (embedded within cross-curricular activities such as 'Forest Fridays' and other cross-curricular links, outdoor provision).</p> <p>Children should be aware of and be engaged in learning 'Mathematics' as an important specific subject and area of learning.</p> <p>Key links to Development Matters are recorded via written observations and are shared on Tapestry and in the children's Learning Journey folders.</p>	<p>White Rose slides and all lesson plans to be followed to link to the long-term overviews (from the National Curriculum and White Rose).</p> <p>Lesson plans need to be bespoke and fit the needs of the children.</p> <p>Enhance the learning opportunity by cherry picking from other resources – NCETM PD materials, NRICH resources where appropriate and purposeful.</p> <p>Unit plans to be completed for each maths unit (may be up to 3 weeks – 15 lessons). Expected these commence after October half term.</p> <p>Planning needs to be progressive and build and have a clear sequence of learning. We do not plug and play – must be prior consideration to the planning and this is shown through the medium-term unit plans.</p> <p>Learning in parallel classes should mirror each other – linked to the block of learning. However, individual classes could have individual lessons designed for them if formative assessment identifies the need.</p>

F2 Follow the Mastering Number programme. They follow the slides and resources for 10/15 minutes daily.

Continuous provision matches the learning intention for that session.

This will provide opportunities for children to problem solve and develop their spatial reasoning skills daily through real life situations and provision.

Lessons should typically follow the pattern below.

Step 1 - Lessons should start with a Flashback 4 (In maths book) Answers shared and children to mark with purple pen/pencil. UPKS2 also complete Fluent in Five.

Step 2 – The learning objective is shared and so too is the overview of the lesson’s direction.

Step 3 – Teaching input. New learning is introduced here (opportunity to teach new vocab). Children should be actively participating by writing answers on whiteboards, using the board alongside the teacher, using concrete objects, fingers, number fans etc. There is lots of movement here! Teachers draw, exemplify, and represent the maths alongside the children. They are encouraged to draw it, move it and see it.

Questions will be built into this part of the lesson and carefully designed questions (Hinge-point questions) are delivered either verbally, on whiteboards or in books. From here, AfL strategies are utilised and direction of lesson decided.

Further input may be necessary.

Step 4 – The lesson will move on with further opportunities for consolidation through questions designed with intelligent practice, problem solving and reasoning.

Step 5- Assessment; most children should mark their own work within the lesson where not taking away from the teaching. Answers should be available, and teachers should evaluate the lesson to decide upon next steps and those needing pre-post teach activities.

Step 6- End with summary of learning; where this learning fits in, what our next step will be. Exit questioning in the plenary will summarise learning and offer some MGD elements.

Ensure challenge is peppered throughout the lesson and is not left until the end of the lesson. Any questions that require mastery with greater depth are marked with yellow (paper, highlighter or power-point slides).

		<p>Misconceptions should be addressed within a week.</p> <p>Children must not be afraid to make mistakes - use the language of 'yet' - You don't know it YET, you can't do it YET. One of St Michael's mantras is that 'this is a safe place to make mistakes'.</p>
Flash Back 4	N/A	<p>Flashback4's should be completed in books (question numbers and answers only) and this should take maximum of 5 minutes. Consider setting a timer. In Year 1 Flashback 4's can be printed and stuck in.</p> <ul style="list-style-type: none"> ✓ Flashback 4 retrieves knowledge from the previous lesson, the previous week, earlier in the year or previous year depending. The answers should be used to guide future planning and support addressing misconceptions. Pre or post teach interventions or adapted planning when individuals/groups or whole classes are showing they need additional support. <p>Flashback 4's can be edited by the teacher if necessary</p> <p>Flashback 4 should be marked by children immediately after completion using purple progress pencil/pen.</p>
Number Bonds and Times Tables	<p>Number foci is shared with parents using Tapestry (observations of pupils) and a weekly newsletter shares the intended learning with parents and key links to resources and ideas where relevant.</p>	<p>TT Rockstars – This program should be accessible and encouraged as part of weekly homework from Year 2 onwards. Progress should be celebrated through sharing of improved times and the profile of TT Rockstars kept high through participating in events.</p> <p>Number bonds are also regularly practiced. Children are expected to know the number bonds that are relevant to their year group as quickly.</p>
Timetabling	<p>Daily short adult-led focused maths input (15mins) for whole class. This is heavily based on the Mastering Number programme. Number rhymes,</p>	<p>Daily maths sessions - minimum of 50 minutes.</p> <p>FS and UKS2 timetable their maths sessions between 9:30 and 10:20.</p> <p>LKS2 and KS1 timetable their maths sessions between 11 and 12.</p>

	<p>songs and games supplement provision and may be included at additional points of the day.</p> <p>Extended maths inputs are carried out with those pupils not demonstrating mastery of a concept.</p> <p>Maths to be planned for and carried out in the outside learning environment every day.</p> <p>Children to be given opportunity to talk about what they notice (use vocabulary) and make connections in the continuous provision.</p> <p>Opportunities to practice new skills thoroughly in different areas of provision.</p>	<p>One session per week (from Y2-Y6) is an arithmetic, fluency focused lesson.</p> <p>Extended maths inputs are carried out with those pupils not demonstrating mastery of a concept.</p>
<p>Intervention</p>	<p>Additional maths provision will be available for those pupils not demonstrating mastery of a concept.</p> <p>Intervention may also be scheduled with a teacher/teaching assistant 1:1 or as part of a small group to</p>	<p>Additional maths provision will be available for those pupils not demonstrating mastery of a concept.</p> <p>Intervention may also be scheduled with a teacher/teaching assistant 1:1 or as part of a small group to that is based on the precision teaching of mathematical concepts, for example, number bonds, multiplication and division or fractions.</p>

	<p>that is based on the precision teaching of mathematical concepts, for example, number knowledge and counting.</p>	<p>Certain year groups may experience 'boosting' to address gaps and strengthen understanding and experience.</p>
<p>Maths across and outside of the curriculum</p>	<p>Teachers should consider when planning lessons naturally occurring opportunities to develop mathematics across and outside the curriculum. When maths is being taught outside of mathematics lessons it should still be age appropriate e.g. bar charts should not be in Year 6, whereas a four quadrant line graph would be more appropriate activity.</p> <p>Continuous provision should include maths activities.</p> <p>Whole school themed days have taken place and will continue. For example, Problem Solving day and Outdoor Learning day.</p> <p>Mathematics after school activities are in place with the provision of the club 'Magic Maths' from an external provider.</p> <p>Homework club for children to access Phase Chrome Books during lunchtimes is available.</p>	
<p>Vocabulary</p>	<p>Vocabulary should be displayed in the classroom and be used by the staff in questions. Staff must expect children to use the correct vocabulary in verbal and written responses.</p> <p>Vocabulary is stated in the National Curriculum as well as our whole school calculation policy.</p>	

<p>Expectations for recording children's work</p>	<p>One recorded piece of mathematics work per week is placed in the child's Learning Journey folder. Introduce large-squared paper to be stuck in books when appropriate (summer term ready for year 1).</p> <p>Tapestry observations of outside environment learning and maths in the continuous provision.</p>	<ul style="list-style-type: none"> ✓ WALT to be in all books. ✓ Flashback 4 at start of lesson clearly recorded. ✓ Children record answers and working in books. Any copies of slides/problems/examples can be stuck in throughout lesson. ✓ Yellow highlight any GDS challenges in books. ✓ Children self-mark in purple pen/pencil or teacher marks using ticks for correct answers and dot for those to look at again. ✓ Children given time to amend and make corrections. ✓ Children in KS2 RAG rate their WALT by colouring a square in red, yellow or green. ✓ Teacher to tick the coloured square if in agreement. <p>Children record the dot date, one digit per box with dots in between and underline with a ruler.</p> <p>Before Flashback 4 children write 'FB4', underline with a ruler and then write questions numbers and answers in their book underneath each other. Miss 1 line between questions.</p> <p>The WALT (Learning Objective) is written through the boxes, not one letter per box and underlined with a ruler</p> <p>Record the question number followed by a bracket not a dot as this can be confused with decimals</p> <p>No more than 5 examples are needed for children to practice fluency or any concept/calculation.</p>
<p>Expectations for marking</p>	<p>Teachers mark in green pen.</p> <p>Children get constant, immediate feedback in line with marking and feedback policy.</p>	<p>Ideally children should mark their own work using purple progress pencil/pen.</p> <p>This can be by having answers available at the front of the room or on the working wall, or stopping and giving answers for the first 3 questions or peer marking (but not swapping books) – for example, I have had my answers marked already so I can share the answers with you now.</p> <p>Children must get constant, immediate feedback.</p>

		<p>Teachers should mark according to the Feedback and Marking Policy.</p> <p>Teachers mark in green pen.</p>
<p>Expectations for absent children</p>	<p>Parents may be contacted via Tapestry to share the foci of the learning and suggested activities (i.e. via video links).</p> <p>Children that return and haven't accessed any work due to illness will be accessing time with the teacher/ teaching assistant to ensure gaps in learning are closed.</p>	<p>Materials may be shared with parents to notify them of missed learning and to support them with these areas.</p> <p>Children that return and haven't accessed any work due to illness will be accessing time with the teacher/ teaching assistant to ensure gaps in learning are closed.</p>
<p>Environment</p>	<p>Quality resources for independent access including an interactive maths table as part of the continuous provision offer.</p> <p>Outside environment with math's resources and equipment</p> <p>Maths working wall containing photos and images relating to the current foci alongside key vocabulary.</p>	<p>Resources should be of good quality and there should be enough to support all pupils that may need to access them.</p> <p>Maths resources should be available for all children to access and clearly displayed and/or labelled.</p> <p>Maths Working Wall should display strategies and vocabulary to support independent learning.</p>

<p>EAL provision</p>	<p>Visual support and/or bilingual dictionaries with images will help EAL children to show their understanding in this area of learning. (Many dictionaries have clearly presented sections/pages on shapes which can be easily referred to by both children and teachers). This could also be shared with parents to encourage continued learning at home in first language.</p> <p>Ensure there is a range of materials and concrete resources, which allow children to demonstrate their mathematical understanding. Be aware that children may confuse mathematical symbols e.g. 4 in Bengali looks very similar to an 8 in English, a 6 in Arabic looks very similar to a 7 in English.</p>	
<p>Pre- and Post-teach</p>	<p>N/A</p>	<p>Pre/Post teaches are an effective way to support children who just about manage in maths lessons. Pre-teaches also build confidence, which tends to be the biggest stumbling block.</p> <p>The session can be around (10-15 mins) and can be ran by the teacher or a TA during a worship session or another appropriate time during the school day.</p> <p>Be flexible with the children – those just below EXP or just below GDS.</p> <p>Either deliver very similar context to what they will see in the lessons and on other occasions the exact same context is used</p>
<p>Homework</p>	<p>Homework in maths officially commences from Year 2 through to Year 6.</p> <p>FS may share links to useful resources in their weekly newsletter and Year 1 share with parents some useful resources to support with number and calculation via the WhiteRose 1 Minute App.</p> <p>Year 2 -Year 6 set weekly multiplication and division homework on the TT Rock Stars platform.</p> <p>Year 5 and 6 also set fortnightly homework on maths.co.uk which provides instant assessment and feedback to teachers around pupils' proficiency on the set task.</p> <p>Some classes choose to send work completed at school, i.e. an arithmetic or timestable test home. Parents and pupils are encouraged to look at some of the questions and work together on these if they choose to do so.</p>	

