

WHAT MATHS LOOKS LIKE AT ST. FRANCIS

CURRICULUM

In Early Years, the framework is covered using Master the Curriculum in Nursery and Mastering Number in Reception. This has then been dovetailed with Oak Academy to cover the national curriculum for maths in Key Stage 1 and 2. There has been considerable thought given to ensuring a focus on fluency to secure firm foundations and develop good number sense using Mastering Number for pupils in Reception to Year 5 with a view to implementing this in Year 6 when the NCETM publishes this documentation.

TIMETABLING

In Early Years, pupils benefit from focused teaching during carpet sessions as well as targeted group teaching which is supplemented further with independent challenge in the reception class and quality interactions enhance pupils' attainment. In Key Stage 1 and Key Stage 2, the allocation of maths on the timetables reflects the school's focus on improving pupils' fluency and mathematical reasoning skills.

In Early Years;

- 20 minutes focus following whole class input

In Years 1-5, this looks like;

- 20 minutes Mastering Number
- 60 minutes Oak Academy

In Year 6, this looks like;

- 20 minutes arithmetic
- 60 minutes Oak Academy

	Monday	Tuesday	Wednesday	Thursday	Friday
Nursery	Master the Curriculum	Maths -Master the Curriculum	Maths – Master the Curriculum	Maths through well matched provision based on learning from earlier in the week	Maths through well matched provision based on learning from earlier in the week
Reception	Mastering Number/ Master the Curriculum	Mastering Number/ Master the Curriculum	Mastering Number/ Master the Curriculum	Mastering Number/ Master the Curriculum	Maths through well matched provision based on learning from earlier in the week
Key Stage 1	Mastering Number (fluency) Oak Academy (Fluency, reasoning and problem solving)	Mastering Number (fluency) Oak Academy (Fluency, reasoning and problem solving)	Mastering Number (fluency) Oak Academy (Fluency, reasoning and problem solving)	Mastering Number (fluency) Oak Academy (Fluency, reasoning and problem solving)	Mastering Number - Foundational knowledge focus Oak Academy (Fluency, reasoning and problem solving)
Year 3, 4 and 5	Mastering Number (fluency) Oak Academy (Fluency, reasoning and problem solving)	Mastering Number (fluency) Oak Academy (Fluency, reasoning and problem solving)	Mastering Number (fluency) Oak Academy (Fluency, reasoning and problem solving)	Mastering Number (fluency) Oak Academy (Fluency, reasoning and problem solving)	Mastering Number - Times Table Assessment/ Arithmetic Assessment Oak Academy (Fluency, reasoning and problem solving)
Year 6	Arithmetic Oak Academy (Fluency, reasoning and problem solving)	Arithmetic Oak Academy (Fluency, reasoning and problem solving)	Arithmetic Oak Academy (Fluency, reasoning and problem solving)	Arithmetic Oak Academy (Fluency, reasoning and problem solving)	Arithmetic Assessment Oak Academy (Fluency, reasoning and problem solving)

TEACHING AND LEARNING IN MATHS

Mastering Number supports the teaching of foundational knowledge in number through structured, daily practice that builds fluency, automaticity and a deep understanding of number relationships. Pupils develop secure recall alongside conceptual understanding through carefully sequenced representations, mathematical talk and varied practice, enabling them to apply their knowledge confidently in calculation and problem solving in their Oak Academy lessons.

Teachers use the available curriculum resources from Oak Academy to meet the needs of pupils, with a focus on readiness and firm foundations whilst considering;

- **Coherence:** design small, connected steps that reveal the process of learning a given concept
- **Representation & Structure:** select and sequence models (manipulatives, images, bar/number lines, arrays) to expose underlying relationships; fade scaffolds towards abstraction.
- **Mathematical Thinking:** plan for pattern-spotting, generalising, conjecturing and proof-like reasoning in every unit.
- **Fluency:** secure key facts and procedures through varied, purposeful practice (including retrieval, counting and facts rehearsal), with attention to flexibility and efficiency.
- **Variation:** use conceptual and procedural variation to focus attention on critical features and deepen understanding.

In order to inform the next steps for learning, teachers use formative assessment strategies within the lessons to inform pupils' readiness for learning. As pupils progress through the planned tasks, informed decisions are made about when pupils are 'ready' to start their well-matched activities from the Oak Academy scheme. Teachers are confident to make decisions about what pupils need to hear and do next based on their formative and summative assessments.

STRUCTURE OF A MATHS LESSON

Using Rosenshine's Principles of Instruction, lessons at St. Francis follow a consistent lesson structure across the curriculum. In maths, pupils are introduced to new learning through explicit instruction and clear teacher modelling, including the modelling of calculation methods and mathematical thinking. Pupils then apply their learning through structured opportunities to develop fluency and reasoning, before being challenged to deepen their understanding through problem-solving and rich mathematical tasks.

- **'Do Now'**-Flash Back 4 (taken from White Rose), preview of learning
- **Explicit Instruction** – teachers use an adapted 'explanation' section of the available resources from Oak Academy
- **CFU – using feedback from pupils to inform next teaching steps**
- **'We Do'**– teachers use the adapted 'check' section of the available resources on Oak Academy
- **CFU -using feedback from pupils to inform next teaching steps**
- **'I Do' TASK A**- teachers use the adapted 'practice' section of the available resources on Oak Academy
- **CFU- using feedback from pupils to inform next teaching steps**
- **Explicit Instruction** – teachers use an adapted 'explanation' section of the available resources from Oak Academy
- **CFU- using feedback from pupils to inform next teaching steps**
- **'We Do'**– teachers use the adapted 'check' section of the available resources on Oak Academy
- **CFU- using feedback from pupils to inform next teaching steps**
- **'I Do' TASK B**- teachers use the adapted 'practice' section of the available resources on Oak Academy. Teachers use *'I see reasoning' resources to appropriately challenge pupils' learning*
- **'Review' / Challenge**– teachers use the adapted 'summary' section of the available resources on Oak Academy

MATHS RESOURCES

Teachers ensure that pupils make best use of manipulatives to support conceptual thinking. Manipulatives can be found in classes and are accessible for pupils to use as and when they require them. The accessible nature and use of resources to aid learning is explicitly modelled to all pupils, in all year groups and is evidenced in pupils' learning.

Additional resources to supplement teaching and learning –

I see Reasoning

White Rose

PRESENTATION IN MATHS BOOKS

Teachers model the same expectations that they have of pupils, from presentation to reasoning with their thinking.

In KS1;

- date and LO may be printed and stuck into books
- adults ensure pupils books are ready to present their work in line with older year groups
- pupils work in pencil
- question numbers should be recorded in the margin
- 1 digit, 1 box
- Anything handwritten, should follow the pupils' usual handwriting style, whether printed or joined
- Teachers should ensure that pupils have opportunity to continue to ensure automaticity is mathematical transcription and therefore, avoid worksheets as much as possible. If it is decided that fluency from Oak Academy has to be stuck in, this should be easily identifiable with a blue border
- Challenge questions should also be easily identifiable, with a green border
- Where appropriate, exit questions may also be in books
- Pupils self-assessment should be evident at the end of the lesson

In KS2;

- Date and LO are handwritten into books
- Pupils work in pencil
- pupils use 30cm rulers to draw margins which create two columns for pupils to organise their learning in
- 'D-U-M-T-U-M-S' – date, underline, miss a line, title/LO, underline, miss a line, start.
- Date and LO to be underlined with a ruler – using the printed lines as a guide
- Top line missed, then short date, then LO, both underlined neatly
- question numbers should be recorded in the margin
- 1 digit, 1 box
- Anything handwritten, should follow the pupils' usual handwriting style, whether printed or joined

TIMES TABLES

Pupils in Key Stage 2 have a weekly times table test which informs targeted support for pupils as well as whole class planning. Times table checks are completed in line with other subjects in assessment weeks and are tracked by the maths subject leader.

INCLUSION AND SEND

Teaching and learning for all pupils is carefully considered through an adaptive teaching approach, with teachers using their detailed knowledge of pupils to ensure individual needs are met. A range of targeted interventions, including pre-teaching, support pupils to access new learning. Flexible groupings within Mastering Number enable teaching to be responsive to pupils' strengths and barriers, ensuring appropriate support and challenge so that all pupils can make progress.

ASSESSMENT IN MATHS

Formative assessment is used consistently throughout lessons to check for understanding, alongside termly NFER assessments which provide summative information in Years 1–6. Assessment outcomes directly inform planning and ensure timely adaptations are made so that all pupils make the progress they need.

In collaboration with the SENDCo, leaders use assessment information to make informed decisions about how the curriculum and assessment approaches can be adapted to meet the needs of individual pupils. Pupil engagement and effective checking for understanding enable teachers to drive pupils' thinking and provide purposeful feedback. This ensures that new learning is securely understood, supports the accurate building of new knowledge and clearly informs next steps in teaching and learning.

WORKING WALLS IN MATHS

Working walls in maths display the *process* of learning a particular approach to a mathematical concept and are supported through the use of widgets to develop and reinforce abstract vocabulary. Displays include key vocabulary, concrete, pictorial and abstract (CPA) representations, and worked examples drawn from explicit teacher modelling. Sentence stems are used to support pupils to respond and reason like mathematicians. Working walls are designed as *working documents* that evolve throughout a unit, reflecting the learning journey as it progresses.

At St. Francis, working walls are used to promote pupils' independence, facilitate mathematical discussion and provide feedback. Misconceptions are made visible and explored alongside CPA representations to support deeper understanding.

At St. Francis, effective working walls include:

- **Modelled examples:** Carefully selected examples from previous lessons to support pupils' working memory and retrieval.
- **Visual representations:** Clear and purposeful visual models to aid conceptual understanding.
- **Interactive displays:** Opportunities for pupils to contribute their thinking, examples and representations.
- **Co-created content:** Pupils are involved in the design and development of working walls to foster ownership, engagement and deeper learning.

Examples of language you will see on working walls include:

- *Marvellous misconceptions*
- *Marvellous mistakes*
- *What went wrong...?*
- *I know... therefore I know...*
- *Excellent examples...*
- *Another way I could do this is...*

TALKING LIKE A MATHEMATICIAN

	Talking like a Mathematician Sentence Stems	
	<ul style="list-style-type: none">• It is the same / different...• This reminds me of...• I can prove I'm right because• We must remember...because• There is one more/one less...	
	<ul style="list-style-type: none">• My working out is the same / different than yours because...• I can prove I am right because...• Another strategy you can use is...• I learnt the word...and it means...	
	<ul style="list-style-type: none">• We know that... so... it can't be...• A major difference between... and... is that...• I agree because...• My strategy works because...• I can check my answers by...• Next time, I will...	
	<ul style="list-style-type: none">• I think the question means... so the answer means...• I know that... Therefore, I would try out...• I approached it methodically by...• I was systematic... when...• I looked at the whole problem and broke into these steps...• So far, I have discovered that...• The strategy I used was...• I agree/disagree with...because...• The solution makes sense because...• I can visualise this problem by...• I know my answer is reasonable because...• The information needed to solve the problem is...• When I used the inverse, I noticed...	