



### Intent

The intention of the maths curriculum at St Wulstan's Catholic Primary School is that children are taught to become competent mathematicians. We strive to embed the skills and processes necessary to enable children to use and apply their maths learning in a variety of contexts including other subjects. We aim to develop children's enjoyment of maths and provide opportunities for children to build a conceptual understanding of maths before applying their knowledge to everyday problems and challenges.

At St Wulstan's, we have adopted a mastery approach to the teaching of maths whereby children are given a deeper and broader understanding of the key mathematical concepts rather than being accelerated quickly through new content. The Maths Lead has been working as part of a Teaching for Mastery Work Group, a programme developed by the Maths Hub and the National Centre for Excellence in Teaching Mathematics (NCETM) since 2019. The mastery approach to maths was initially rolled out in one Key Stage 1 and one Key Stage 2 class before being rolled out across the school. All staff are trained in the approach through staff meetings, external CPD and are supported in maths professional development meetings/coaching sessions and through modelling lessons.

Teachers address gaps in pupil's mathematical knowledge and understanding through appropriate scaffold and adaptation. For some pupils, a personalised curriculum plan for maths is more appropriate in enabling them to achieve success in maths. Teachers have the flexibility to deliver content in a way that it is engaging and effective in maths to ensure the children are inspired and thrive in their learning, no matter their age or ability.

Mastery of maths means a deep, long-term, secure and adaptable understanding of the subject. It is our aim for the majority of pupils to move at broadly the same pace through the programmes of study, using small steps in understanding and coherence, whilst also considering the pace of learning required to ensure an appropriate level of challenge for all.

We want children at St Wulstan's to:

- be fluent in maths through a rapid and accurate recall and application of facts and concepts,
- use appropriate mathematical language and vocabulary in the right context in order to reason mathematically,
- be able to apply maths to solve problems and test hypotheses,
- make rich connections across mathematical ideas, as well as the curriculum,
- be able to work both independently and collaboratively as part of a team,
- use mathematical talk to articulate and discuss their thinking through reasoning and problem solving activities.

### Implementation

At St Wulstan's, we recognise that in order for pupils to progress to deeper and more complex problems, children need to be confident and fluent across each yearly objective. To ensure our pupils acquire a deeper understanding in their mathematical learning journey, we follow the White Rose Maths Hub schemes of learning. Within these, each National Curriculum objective is broken down into small steps. Our teachers use this document in conjunction with a range of high quality resources such as White Rose Premium, Focus Maths and Teaching For Mastery to support, stretch and challenge all learners within the classroom. Our teachers use three levels of learning challenges to teach for mastery - an approach to extend and deepen the understanding of pupils within each year group.

To raise fluency standards in Maths, we use KIRFs (Key Instant Recall Facts) as a whole-school program. It is important that children know these facts thoroughly and can recall them instantly. The KIRFs are designed to be a set of facts that need to be learnt thoroughly as they build on each other year on year. When children are secure with these facts, they are then able to carry out calculations/methods without the lack of basic facts getting in the way. As a school we also use Times Table Rockstars for the children to practise their times tables at home and at school.

#### Lesson Structure

- Flashback Quiz - retrieval
- KIRFS - fluency
- Anchor Task (to find out what the children already know)
- Episodic teaching (teacher, children, teacher, children) where the children are actively involved in representing, calculating and discussing and have the opportunity to use concrete apparatus and visuals to enforce the concept
- Independent learning tasks:
  - Do it - What it is and What it is also (standard and non-standard)
  - Twist it - What it's not (an active argument about misconceptions and reasoning about mistakes)
  - Deepen it - Opportunities to apply understanding to familiar and unfamiliar problems (including missing number problems, Always/sometimes/Never)
- Some children will take part in guided practice, where the teacher can further model work to children who need additional support.
- Summary/Round Up of the learning.

#### What you will typically see:

- The large majority of our pupils will progress through the curriculum content at the same pace.
- Teachers will use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those requiring intervention so that all pupils keep up.
- Vocabulary is explicitly taught at the start of each unit of learning and is modelled continuously by the teacher/teaching assistant throughout the unit of work.
- Teachers will use the concrete, pictorial and abstract approach (CPA) to ensure that procedural and conceptual understanding are developed simultaneously.
- Teachers and TAs will move around the classroom and actively respond, challenge and support children with their learning.
- Children will be taught in mixed ability groups and the groups within these will be flexible and can change depending on the nature of the lesson.
- Emphasis placed on 'learning' through reasoning, developing multiple strategies and concepts towards understanding.
- Challenge for pupils grasping concepts quickly is provided through depth and breadth of experience.
- Daily opportunities to reason and problem solve.
- Working walls used to display strategies that are being used and should include key vocabulary.
- Challenge and extension for 'rapid graspers':
  - 'Having a clever day?' questions as early as the retrieval quiz
  - Reasoning challenges
  - Enquiry tasks
  - Broader enrichment tasks in a range of contexts
  - Opportunities to write explanations
  - Opportunities to explain to others, including specialist Peer Mentor roles
  - Opportunities to generate own questions and problems – innovate
  - Representation of a concept in a variety of ways to show conceptual understanding

#### Early Years

Teaching throughout Reception ensures that children have a good grounding in maths. As well as the children learning very important number skills and facts, they learn important skills such as problem solving, understanding and using shapes and measure and developing their own spatial awareness. A high focus is placed on using concrete resources such as Numicon, part-part whole models and tens frames. We deliver whole class teaching in Reception using the Mastering Number programme from the NCETM. Attention is given to key knowledge and understanding needed in Reception class, and progression through KS1 to support success in the future. We also use White Rose materials, Numberblocks and the related NCETM materials as a stimulus for lessons.

### Impact

The intended impact of our curriculum for all children, regardless of ability, background or additional needs:

- By the end of each Key Stage, our children achieve and make progress in line with other pupils nationally
- By the end of KS2, children should be able to recognise the value of maths in their lives and understand that it is an essential skill which they will carry forward with them.
- Children demonstrate a quick recall of facts and procedures. This includes the recollection of the times table demonstrated by children in Year 4 achieving 25/25 in the Multiplication Check.
- Children show confidence in their knowledge and understanding of mathematical vocabulary.
- Children show flexibility and fluidity to move between different contexts and representations of maths.
- Children are given the chance to develop the ability to recognise relationships and make connections in maths lessons.
- Mathematical concepts or skills are mastered and a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.
- Children show a high level of pride in the presentation and understanding of the work.

#### How we measure impact:

- Summative assessment takes place at the end of each term and is recorded on our data analysis system, Insight.
- Children's progress and attainment is discussed with senior leaders in pupil progress meetings.
- We use the White Rose End of Block and Termly Assessments alongside standardised score tests to help form a summative judgement. The information from these is then used to inform future teaching.
- Formative assessment takes place on a daily basis and teachers adjust planning accordingly to meet the needs of their class.
- The teaching of mathematics is monitored frequently by leaders through lesson observations, book looks and pupil voice interviews.
- Live marking in each lesson allows teachers to assess the impact of the curriculum on a daily basis.