



Curriculum Intent

The national curriculum for mathematics intends to ensure that all pupils:

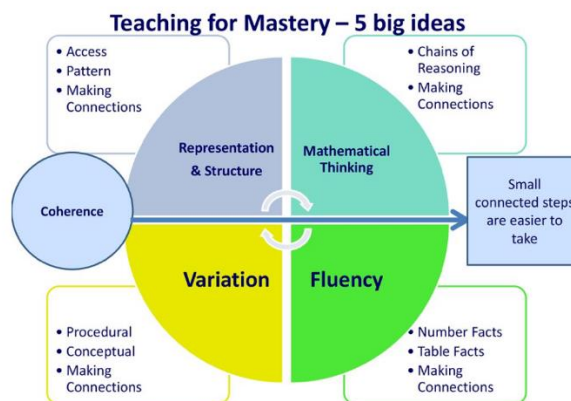
- 1. Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.**
- 2. Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.**
- 3. Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas.**

At St Cuthbert's, we intend to provide a curriculum which caters for the needs of all individuals and sets them up with the necessary skills and knowledge for them to become successful in their futures. Through mathematics, we aim to give children essential life skills as well as prepare them for a successful working life.

We incorporate sustained levels of challenge through varied and high-quality activities with a focus on fluency, reasoning and problem solving. Every lesson includes the opportunity to develop fluency skills, reason using relevant mathematical vocabulary and solve problems in a systematic and coherent way. Lessons are structured following

Many of the trust virtues underpin our maths curriculum. Children are taught to become **confident** and competent mathematicians. Through the curriculum, children should be able to use and apply their mathematical skills in a variety of contexts. At St Cuthbert's, we teach our children about the importance of **resilience** and encourage them to accept that at times maths can be challenging, but that they understand that a challenge in maths is a necessary step in learning. Children are encouraged to explore maths in depth, using mathematical vocabulary to reason and explain their working out. We use a wide range of resources and children are taught to show their workings in a mixture of concrete, pictorial and abstract where relevant. Children are encouraged to independently access resources which they feel will support them, taking **responsibility** of developing and mastering lifelong learning skills.

Central to our mastery approach are the 5 big ideas (coherence, variation, fluency, mathematical thinking and representation and structure).



Curriculum Implementation

At St Cuthbert’s, we follow the National Curriculum for Maths, and to ensure consistent coverage across the trust, children study mathematics daily following the Power Maths and White Rose Maths Schemes of learning as a basis for planning. The schemes are blocked which allows for breadth and depth within each strand. Teachers use their professional judgement to provide learning opportunities that suit their children. Children who grasp concepts rapidly are challenged by being offered rich problems to solve before any acceleration through content. Those children who are not sufficiently fluent, have opportunities to consolidate their understanding through additional practice. We use ‘Same Day Intervention’ to ensure children keep up rather than catch up. The expectation is that most children will move through the units at broadly the same pace. Where an area of need is identified, necessary adaptations will be made and further support provided to aid pupils to close gaps and make good progress.



Year 4 Planner

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Year 4 progression: there has been very little change to the progression of units vs the first edition, but note that Area rather than Perimeter is now the Measure unit included in Term A. You can see the new progression of lessons within the units by looking at the progression file for Lower KS2.

Resources to have ready: in the Autumn term you are mostly going to need place value counters and grids.

Week	Term		
	Autumn	Spring	Summer
1	Unit 1: Place value - 4-digit numbers (1) (8 lessons)	Unit 6: Multiplication and division (2) (16 lessons)	Unit 11: Decimals (2) (7 lessons)
2			Unit 12: Money (6 lessons)
3	Unit 2: Place value - 4-digit numbers (2) (8 lessons)	Unit 7: Perimeter (6 lessons)	Unit 13: Time (5 lessons)
4			Unit 14: Geometry – angles and 2D shapes (8 lessons)
5	Unit 3: Addition and subtraction (16 lessons)	Unit 8: Fractions (1) (9 lessons)	Unit 15: Statistics (6 lessons)
6			Unit 16: Position and direction (6 lessons)
7	Unit 4: Area (5 lessons)	Unit 9: Fractions (2) (8 lessons)	
8			
9	Unit 5: Multiplication and division (1) (12 lessons)	Unit 10: Decimals (1) (12 lessons)	
10			
11			
12			



The mastery approach incorporates concrete, pictorial and abstract representations (CPA) and our calculation policy supports this. This approach helps the children to better explore and demonstrate mathematical ideas, deepen their understanding and enrich their learning experience. This allows the children to truly understand what they have learnt.

Concrete – children should have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.,

Pictorial – children should then build on this concrete approach by using pictorial representations. They can be used to reason and solve problems

Abstract – once the foundations have been laid – the children should be able to move to an abstract approach using numbers and key concepts building on their **confidence** at each stage.

At St Cuthbert's, children also have a discreet arithmetic session weekly. This is supplemented by daily opportunities to address identified gaps from assessment as well as revisit and revise previously taught skills through short burst daily arithmetic (at the beginning of the day or the start of maths lessons). Arithmetic is an essential building block and a key life skill. In order to gain true fluency, we believe that regular practice and a consistent approach across school is essential. Good arithmetic skills enable our children to flexibly approach maths problems in different ways. Through regular practice, children build confidence which in turn aids the application of skills when reasoning. We also clearly structure the teaching of times tables across school, providing children opportunities to practise them regularly and become confident recalling facts and making links by identifying related facts. Times tables are tested weekly and results analysed.

Curriculum Impact

At St Cuthbert's, it is the expectation that most children will move through the programmes of study at broadly the same pace. Our aim is for each child to be confident in yearly objectives and develop their ability to use this knowledge to develop a deep understanding in order to solve varied fluency problems as well as problem solving and reasoning questions.

It is important though that those children who grasp concepts rapidly are challenged to think deeper through sophisticated problems before moving onto new content, and it is imperative that those who are not sufficiently fluent with material have the opportunity to consolidate their understanding, including additional practice as well as opportunities for pre-teaching. We like children to 'keep up' rather than 'catch up' and believe 'Same Day Intervention' is key to achieving this success. Where further support is needed, additional interventions will be carried out in a timely manner. Pre-teaching enables children to develop a better understanding of key vocabulary as well as having a practice run at the skills required in the lesson. This builds children's confidence and self-esteem and gives them a foundation to build upon within the lesson. Adaptive teaching is used following EEF Evidence Review findings to ensure that there are high aspirations for all.

We measure the impact of our maths curriculum through our assessment procedures. Teachers carry out **formative assessment** in each session and feedback is given to children verbally, through self-assessment and through marking. This informs the teachers future planning. Children are identified as needing further challenge or additional support.

Summative Assessments - All children complete an end of block assessment for each unit of learning and at the end of each term, following our assessment cycle, children complete PIXL papers for their individual year groups. All of these results are analysed and QLAs are carried out in order to inform future planning and allow for further tailored intervention groups to ensure objectives are secured.



Multiplication Check Y2-Y6

All children are taught discrete multiplication sessions and are tested at least once a week using the Multiplication Check on Purple Mash. These scores are recorded weekly on a whole school spreadsheet which teachers can access, address gaps and implement times table interventions.

By the time children leave St Cuthbert's, they have acquired firm foundations in mathematics and are well placed to make good progress at Key Stage 3.