

Mathematics Curriculum – St Cuthbert Mayne Junior School – 2023/2024

Our Curriculum Vision – PRAY

| | | | |
|--|---|--|---|
| <p>Protecting our Planet – learn and contribute to protecting God’s creation – in our community and wider work. Caring about the world we live in;</p> | <p>Resilience – be able to face challenges and use them to help us progress. Overcome difficulties that challenge us;</p> | <p>Aspiration – we are created by God to do amazing things – each one of us. Ambitious / belief in ourselves and in what we can achieve.</p> | <p>Yes to equality – we are all equal and important in God’s eyes. Everyone is equal and deserves to be valued and respected.</p> |
| <p>Children’s understanding of number provides them with the knowledge of understanding the world around them. It allows them to comprehend the enormity of the issues facing God’s creation.</p> <p>We teach the children to approach and understand how to solve problems which in turn allows them to transfer these skills to the wider problems facing our world.</p> | <p>Teaching for mastery encourages all pupils to believe that they can achieve mathematical success.</p> <p>This inclusive approach, and its emphasis on promoting multiple methods of solving a single problem, builds self-confidence and resilience in all pupils.</p> <p>Teacher model and scaffold how to access problems to teach and build resilience when facing complex problems within mathematics.</p> | <p>Our approach to Maths at St Cuthbert Mayne is inclusive which allows children to access mathematics and aspire to be successful mathematicians.</p> <p>Teachers provide scaffold and support so children can aspire to access all activities.</p> | <p>Maths mastery promotes the belief that every child can enjoy and succeed in mathematics, regardless of background.</p> <p>Mastery is about keeping children together and not moving at an over rapid pace.</p> <p>The expectation of the new curriculum sets higher expectations for pupil achievement where the majority of pupils will move through the programmes of study at broadly the same pace. Some children may find it difficult to keep at that pace or may even exceed this pace. Therefore, teachers provide personalised learning to suit their needs.</p> <p>Use of concrete manipulatives and pictorial representations allow all children to access mathematics. In addition, the use of technology is also used to promote and support children’s learning.</p> |

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Our Subject Philosophy

"Mathematics may not teach us how to add love or minus hate, but it gives us every reason to hope that every problem has a solution." Anonymous

At St Cuthbert Mayne Catholic Junior School, we have adopted a mastery approach to teaching and learning in mathematics. Mastering maths means pupils of all ages can acquire a deep, long-term, secure and adaptable understanding of the subject.

We believe that every child at St Cuthbert Mayne can achieve in maths and this notion is empowered through 'Quality-first' teaching and an engaging curriculum which challenges and supports our learners. Our curriculum will focus on developing a strong sense of number, fluency and skills. The mastery curriculum will also allow children to identify patterns, solve problems and secure a deep understanding of mathematical concepts.

Teaching for Mastery

Our teaching for mastery centres around five big ideas:

Coherence

There is a coherent learning progression through the curriculum which provides access for all pupils.

Representation and Structure

A range of carefully selected representations are used by teachers in lessons to expose mathematical structures.

Mathematical Thinking

Children are given opportunities to spot patterns and make connections. In turn, this helps children to reason and generalise using precise mathematical language.

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Fluency

Efficient and accurate recall of number facts is essential for pupils as it allows children to think more deeply about concepts and problems.

Variation

Conceptual variation is used to draw attention to critical features of concepts.

Procedural variation is used to draw children's attention to key features, scaffolding how to reason and make connections.

The requirements of the National Curriculum

Purpose of study

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

Aims

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

- 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.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

[Mathematics programme of study](#)

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Maths Long term plan:

| Maths Curriculum Map 2023-24 | | | | | | |
|------------------------------|--|--|--|---|---|---|
| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Year 3 | <ul style="list-style-type: none"> - Adding and subtracting across 10 - Numbers to 1,000 | | <ul style="list-style-type: none"> - Right angles - Securing mental calculation (additive) | <ul style="list-style-type: none"> - Column addition - 2,4,8 times tables - Column subtraction | <ul style="list-style-type: none"> - Unit fractions | <ul style="list-style-type: none"> - Non-unit fractions - Parallel and perpendicular (polygons) - Time |
| Year 4 | <ul style="list-style-type: none"> - Review column addition and subtraction - Numbers to 10,000 - 3, 6, 9 times tables - Perimeter | | <ul style="list-style-type: none"> - 7 times tables - Understanding and manipulative multiplicative relationships - Coordinates | | <ul style="list-style-type: none"> - Review fractions - Fractions greater than 1 - Division with remainders - Symmetry in 2D shapes - Time | |
| Year 5 | <ul style="list-style-type: none"> - Decimal fractions - Money - Negative numbers - Short multiplication and division | | <ul style="list-style-type: none"> - Area and scaling - Calculation with decimal fractions - Factors, multiples and primes | | <ul style="list-style-type: none"> - Fractions - Converting units - Angles | |
| Year 6 | <ul style="list-style-type: none"> - Calculating using knowledge of structures - Multiples of 1,000 | <ul style="list-style-type: none"> - Numbers up to 10,000,000 - Draw, compose and decompose shapes | <ul style="list-style-type: none"> - Multiplication and division - Area, perimeter, position and direction | <ul style="list-style-type: none"> - Fractions and percentages - Statistics | <ul style="list-style-type: none"> - Ratio and proportion - Calculating using knowledge of structures | <ul style="list-style-type: none"> - Solving problems with 2 unknowns - Order of operations - Mean average |

Curriculum Progression at St Cuthbert's Mayne Junior School

- [Number and Place value progression map](#)
- [Addition and subtraction progression map](#)
- [Multiplication and division progression map](#)
- [Fractions \(including decimals and percentages\) progression map](#)
- [Ratio and proportion progression map](#)
- [Measurement progression map](#)
- [Geometry – properties of shapes progression map](#)
- [Geometry – position and direction progression map](#)
- [Statistics progression map](#)
- [Algebra progression map](#)