St Anne Line Catholic Infant School

part of the wider Christus Trust, Multi Academy Trust

Mathematics Policy

Love Learn Pray

Written by: Miss Bond
Date: March 2025
Updates: Annually to reflect any DFE guidance updates or new research outcomes
Full Review Date: 2028

Mission Statement

With Jesus, We Love, We Learn, We Pray.
Together, we grow our school each day.

Our Vision and Ethos

We aim to instill a love of learning, with Christ at the centre of all we do. As the foundation of a lifelong journey of discovery, we inspire resilience and independence in our learners, encouraging them to always strive to reach their full potential.

Our Gospel Values

Love Learn Pray

We have selected three core school values that are simple, memorable, and meaningful for our young learners. These values are rooted in the Beatitudes, the life of St. Anne Line, and are brought to life in the curriculum through inspirational role models.

About this Policy

This Mathematics Policy has been developed following a review of the long-term action plan 2021-2024. This policy continues to reflect the 2014 National Curriculum, and the following recent publications:

- DFE 2024 Strong Foundations in the First Years of School
- Ofsted 2023 Mathematics Subject Review

This policy has been developed by the Subject Leader in consultation with staff and governors. This policy will be updated annually as a result of any new guidance or research. A full review of this policy will be undertaken in 3 years following a full review of the mathematics long-term action plan 2025-2028.

Equality and Inclusion Statement

At St Anne Line Catholic Infant School we strive to create a happy, safe and secure environment, where members of our school community are healthy, enjoy learning, achieve their potential, respect and value each other and themselves.

As an inclusive school the teaching and learning, achievements, attitudes and well-being of every young person matters. We take into account pupils' varied life experiences and needs, to provide opportunities for all pupils, whatever their age, disability, race, religion or belief, gender or social-economic background. We aim to develop a culture of inclusion and diversity in which success is celebrated and all those connected to the school feel proud of their identity and are able to participate fully in school life.

We will tackle discrimination by the positive promotion of equality and the creation of an environment which advocates respect for all.

Introduction

At St Anne Line Catholic Infant School & Nursery we recognise that mathematics is a fundamental part of understanding the world and ourselves. Mathematics builds mental reasoning and logical thinking skills, playing a crucial role in other school subjects such as science, computing and music. A high quality mathematics education also provides the foundations for everyday life beyond school such as in employment and being financially literate.

With this in mind we promote the basic and wider understanding of mathematics in the hope of instilling an enjoyment of the subject, supporting children to engage confidently and positively with mathematics.

Our school values are reflected in our mathematics curriculum in the following ways:

Love

Maths can inspire love, both in the way we think about the world and how we interact with others.

Believing in ourselves or working with others when solving a problem builds confidence and relationships through teamwork.

Maths is used in medicine, engineering, and technology to improve lives and help those in need.

Learn

Mathematics is a powerful subject because it develops real world skills, critical thinking and problem-solving skills which are needed to be a successful citizen managing life and work.

Maths is a universal language across different cultures and languages. Maths is a global skill that allows people to communicate ideas across borders, from science and engineering to economics and art.

Pray

Catholic prayer connects with mathematics in many ways, from structured repetition to sacred numbers and geometric patterns in churches which create rhythm and structure in spiritual life.

Mathematics provides a framework for understanding patterns, just as faith helps people find meaning in life's events.

Mathematics reflects divine order in the universe.

This policy should be read in conjunction with the following school policies and documents:

- Mathematics Progression Map
- Calculation Policies (Reception, Year 1, Year 2)

Our Curriculum Intent

At St Anne Line Catholic Infant School we use the teaching for mastery approach which is a research-driven method that meets the goals of the National Curriculum. We aim to develop depth of understanding rather than accelerating through content to ensure pupils have the foundational knowledge and skills needed for subsequent learning beyond Key Stage 1.

Knowledge and skills are clearly defined and progressively planned from Reception to the end of Key Stage 1. Number is central to our curriculum as confidence with numbers lays the foundations for competency in the curriculum as a whole. Knowledge and skills are reinforced and built upon by being revisited again and again through units of teaching as children progress through each year group and through spaced retrieval at the beginning of lessons. The focus on fluency, reasoning and problem solving gives children the skills they need to become competent mathematicians.

We know from our starting points and findings from the Strong Foundations in The First Years of School publication (2024) that children entering Reception and Key Stage 1 are exhibiting delayed communication and language skills. Our maths curriculum aims to encourage collaboration, with a strong emphasis on vocabulary and opportunities for practice and development of communication and language skills.

Our Curriculum Implementation

Providing an Inclusive Education

We are users of both White Rose Maths and the NCETM as they support our aim to create an inclusive curriculum by ensuring that all pupils, regardless of background or ability, can access and succeed in mathematics. This is achieved by implementing key principles from both White Rose Maths and the NCETM in addition to the Essex County Council Ordinarily Available Inclusive Teaching Framework and the Ordinarily Available Targeted Support Framework.

1. Small Steps Approach

Breaking down concepts into small, manageable steps ensures that all learners can build confidence before moving on, preventing gaps from forming. Teachers will use the "I do, We do, You do" strategy in lessons to model, share, guide and support small step learning. Depending on the progress of learners, some lessons may go back and forth between teacher demonstration and childrens exploration or application.

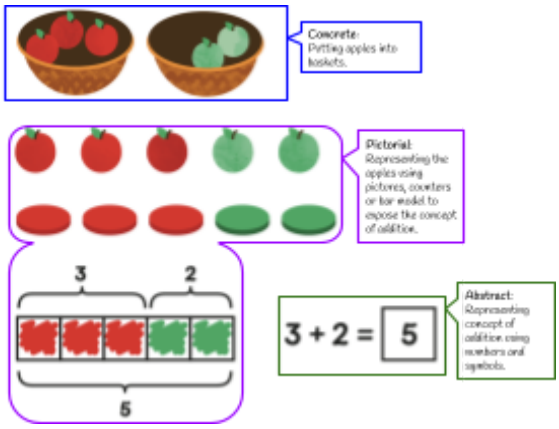
2. High Expectations for All

Teaching for Mastery promotes the idea that all children are capable of understanding and succeeding in maths. This is achieved through depth rather than acceleration, meaning children explore concepts in greater detail rather than moving on too quickly. Using regular assessments of learning we meet children at their stage of mathematics learning, this is particularly the case for children with special educational needs. If children have missed learning or have gaps in their knowledge and understanding, they will be supported to develop this to fluency before moving on, to prevent misconceptions or gaps in their foundational knowledge which may lead to difficulties later on.

3. Concrete-Pictorial-Abstract (CPA) Approach

We use the CPA method to ensure accessibility for all learners which supports children with different learning needs, including those with SEND. Manipulatives and models are used to expose concepts and connections in order to scaffold and strengthen learning.

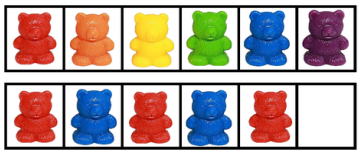
- Concrete: Using real objects/manipulatives (e.g., cubes, counters).
- Pictorial: Moving to diagrams, models and representations.
- Abstract: Working with mathematical symbols and numbers.



4. Intelligent Practice & Fluency

Activities are carefully structured to build fluency while also encouraging reasoning and problem-solving. This ensures that all children, including those who need more support, develop a secure understanding. Cognitive Load Theory suggests that our working memory is only able to hold a small amount of information at any one time and that we should avoid overloading it in order to maximise learning (Sweller, 1988). Therefore, specifically chosen manipulatives and models are used by teachers and children which aim to reduce cognitive load. For example using a set of red, yellow or blue counters (depending on concept representation) rather than multicoloured, different sized counting bears.

Low cognitive load - concept exposed clearly



High cognitive load - concept not easily seen, pupils distracted

Fluency and practice opportunities are provided in the EYFS environment through continuous and enhanced provision so that children can freely explore mathematical concepts. Teachers may model using real-life objects, which are available in the children's learning environment, alongside low cognitive load resources so that children can make a connection between the two.

5. Same-Day Support

Struggling children receive targeted support before the next lesson, preventing them from falling behind. This aligns with the mastery principle of keeping the class together while ensuring individual needs are met.

6. Rich Mathematical Discussions

Mathematical talk and reasoning are central to our teaching due to the context of our diverse school, age and stage of children. The National Curriculum 2014 Mathematics Programme of Study highlights the importance of spoken language in mathematics and states *"the quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions."* We use stem sentences and teach key mathematical vocabulary which are displayed during lessons.

7. Variation Theory

Carefully varied examples are used to highlight mathematical structures and connections. This helps all children, including those who might struggle with abstract reasoning, to see patterns and make sense of new concepts.

8. Accessible and Culturally Relevant Problems

Real-world contexts and diverse problem-solving scenarios that are inclusive and relatable are used to engage all learners. This supports our diverse school community to see themselves reflected in mathematics.

9. Mixed-Attainment Teaching

Rather than rigid ability grouping, flexible groupings are used with preference for mixed-attainment teaching where adaptation, scaffolds and challenges are used. However, we recognise that there may be times where, depending on the individual needs of children, ability groupings may be used to ensure pupils are accessing a personalised provision to ensure they can effectively access mathematics. All groupings aim to foster a collaborative learning environment where children are supported and challenged appropriately.

10. Teacher CPD and Support

We access training and professional development from a range of sources dependent upon the training need identified. Both NCETM and White Rose provide extensive professional development for teachers to implement inclusive practices effectively. We work with Maths Mastery Specialists who are based in two of the Christus Catholic Trust schools as well engaging with local and national work groups who help schools refine their approaches to support all learners.

11. Effective Assessment

A range of assessment methods are adopted to promptly identify progress, misconceptions or gaps in knowledge, so that necessary interventions and support can be implemented. Formative assessment takes place during lessons through the use of hinge questions, observations, reviewing and marking work. In Key Stage 1 short summative assessments take place at the end of blocks and at the end of each term. Teachers use formative and summative assessments to make a judgement of attainment and progress against the National Curriculum and the Ready-to-progress statements which are recorded in Sonar Tracker. Termly pupil progress meetings monitor progress and identify children who need targeted support. Reception teachers use Development Matters to assess attainment towards the Early Learning Goals. The National Curriculum states *"Most children will move through units of learning at broadly the same pace"* where this is not the case, targeted or specialist support will be implemented.

Curriculum Organisation and Progression

We use the White Rose Maths blocked curriculum approach which ensures all objectives from the national curriculum are met. Subsequent blocks continue to consolidate previous learning so that the children continually practise key skills and are able to recognise how different aspects of maths are linked. For example, when children have completed a block which has enabled them to master place value to 20 they will then explore addition and subtraction with numbers to 20.

The White Rose curriculum is a cumulative curriculum, so that once a topic is covered, it is met many times again in other contexts. For example, place value is revisited in addition and subtraction and multiplication and division. The curriculum is designed to have an emphasis on number, with a large proportion of time spent reinforcing number to build competency.

Decisions about when to progress will always be based on the security of children's understanding and their readiness to progress to the next stage. Teachers will assess and will then plan lessons to further explore a concept, deepen understanding or move the class on to the next small step. As a result of this flexible approach you may occasionally find that teaching does not precisely follow the long-term planning blocks outlined in the Appendices. Blocks of time for consolidation are planned into the curriculum to allow for these adjustments.

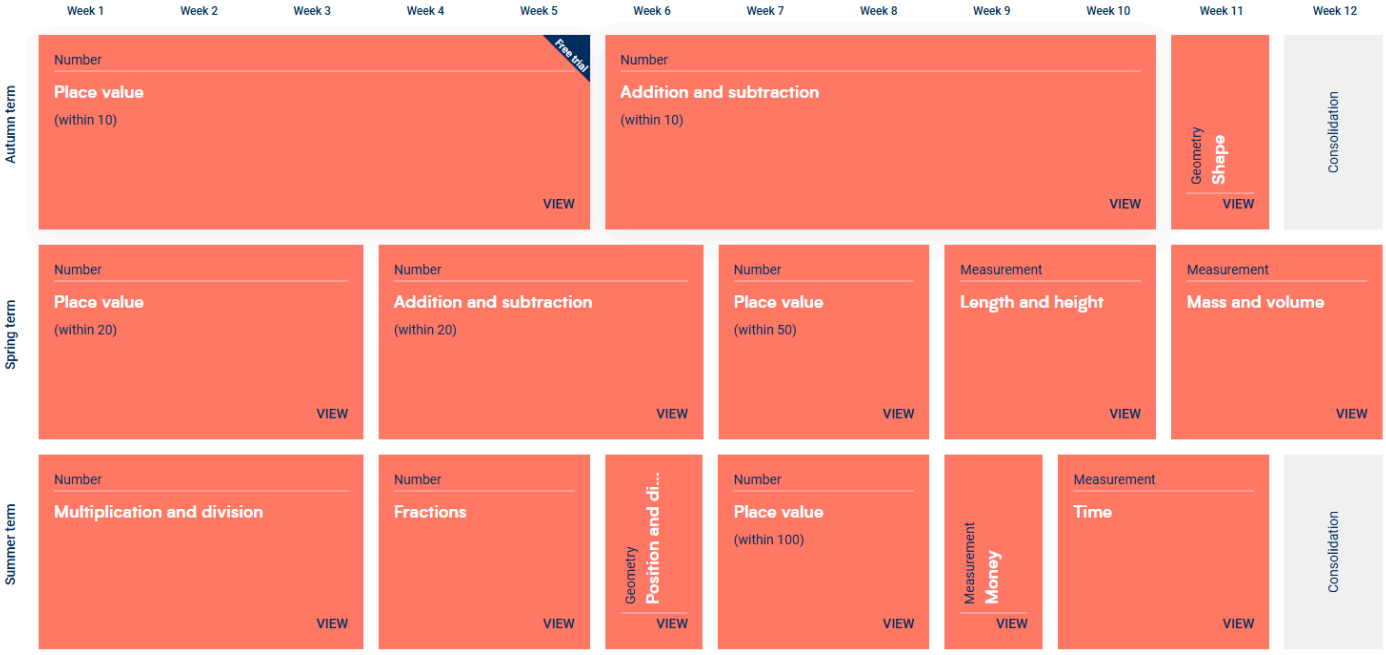
Our Curriculum Impact

The school has a supportive ethos and the teaching for mastery approach ensures children achieve their full potential. A carefully sequenced, progressive curriculum focused on foundational skills and knowledge, regular and ongoing assessment which informs teaching ensures that we are able to maintain high standards. Achievement at the end of Key Stage 1 is well above the national average for those achieving age related expectations and those demonstrating greater depth.

Appendices:

Reception Long Term Plan

Year 1 Long Term Plan



Year 2 Long Term Plan