

# MATHS POLICY



Together with Jesus, we grow in love



## HOLY FAMILY CATHOLIC PRIMARY SCHOOL

Updated March 2021

Agreed by Governors \_\_\_\_\_

Review date: March 2022

This policy outlines the teaching, learning and organisation of the mathematics taught at Holy Family Catholic Primary School. Our policy is based on the National Curriculum 2014 Framework. This policy sets out a framework within which all staff (teaching staff and support staff) should work. It aims to establish a positive learning environment for mathematics focusing on fluency, reasoning and problem solving in varied and exciting ways.

### Intent

At Holy Family, we recognise the importance of numeracy for life. We want our children to be equipped with the mathematical skills, knowledge and understanding, which will support them through life. We develop children who are:

- Fluent in the fundamentals of mathematics who develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Able to reason mathematically by following a line of enquiry.
- Able to solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication.

We aim to celebrate and embrace the diverse home backgrounds of the children, recognising the wealth and variety of experiences that our learners bring with them to school.

### Implementation

Our mastery approach to the curriculum is designed to develop children's knowledge and understanding of mathematical concepts from the Early Years through to the end of Y6. At Holy Family, we follow the **National Curriculum** and **Development Matters** guidelines, whilst using the **School Improvement Liverpool (SIL) Maths Plans** as a guide to support teachers with their planning and assessment.

We use a **CPA** (Concrete, Pictorial, Abstract) approach to learning. The mastery approach incorporates all of these to help children explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding. Together, these elements help cement knowledge so pupils truly understand what they have learnt. The mastery approach incorporates all of these to help children explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding. Together, these elements help cement knowledge so pupils truly understand what they have learnt. Objects, models and images are used to enable children to visualise abstract ideas, alongside numbers and symbols.

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

**Pictorial** - children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.

**Abstract** - With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

Our Calculation Policy (See Calculation Policy) demonstrates how the CPA approach is used within the calculation cycle for the four operations of number with children developing their skills according to a 'Stage not age' approach.

## Curriculum Organisation

The National Curriculum for mathematics is divided into seven sections from Year 1 to Year 6, covering all aspects of mathematics.

They are:

- Place value and number
- Addition and subtraction
- Multiplication and division
- Fractions
- Measurement
- Geometry
- Statistics

Each of these is studied throughout the year in the order listed. As the new curriculum is a mastery syllabus, classes do not progress to the next objective in the section until the majority of students have demonstrated a grasp, development or command of the objective. Within each of the aforementioned topics, children will develop their skills in each of the three focuses: Fluency and calculation - mental and written.

Written calculation is embedded with a calculation policy, developed with staff and School Improvement Liverpool. Mental methods are developed and embedded through starters, tasks and through Basic Skills sessions. In order to equip pupils with the skills required for reasoning and problem solving, reasoning activities are incorporated into various aspects of lessons alongside challenge and next step activities thus enabling all children to access a level of application within lessons. Staff use resources that are readily available from the 'White Rose Maths Hub', the 'Teaching for Mastery document', NCETM Spine materials and 'I See Reasoning' and 'I See Problem Solving' material.

From the start of the nursery through to the end of the Foundation Stage, children will be learning from the Early Years Outcomes including:

1. Number
2. Shape, space and measure

## Daily Maths Lesson

All pupils have a daily maths lesson. The structure of each lesson is flexible and will vary depending on the needs of the children and the content of the lesson. Typically, a maths lesson will include; a learning Objective, activities that provide challenge for each ability group, key questions and the use of additional adults. Other areas for consideration include, steps to success, teacher modelling and the structure of the lesson (chunking, show and go, staggered input).

### Impact

The impact of our mathematics curriculum is that children understand the relevance of what they are learning in relation to real world concepts. We have fostered an environment where we enjoy maths and know that it is okay to make mistakes. Our children are continually growing in resilience as mathematicians and recognise the importance of maths. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child.

### Holy Family Maths Yearly Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Y1</b>	<b>Number</b> Number and Place Value	<b>Number</b> Addition and Subtraction	<b>Number</b> Multiplication and Division	<b>Fractions</b>	<b>Measurement</b>	<b>Geometry</b> Properties of shapes Position and direction
<b>Y2</b>	<b>Number</b> Number and Place Value Addition and Subtraction	<b>Number</b> Addition and Subtraction Multiplication and Division	<b>Fractions</b> <b>Number</b> Multiplication and Division	<b>Measurement</b>	<b>Geometry</b> Properties of shapes Position and direction	<b>Statistics</b>
<b>Y3</b>	<b>Number</b> Number and Place Value Addition and Subtraction	<b>Number</b> Addition and Subtraction Multiplication and Division	<b>Fractions</b>	<b>Measurement</b>	<b>Geometry</b> Properties of shapes Position and direction	<b>Statistics</b>
<b>Y4</b>	<b>Number</b> Number and Place Value Addition and Subtraction	<b>Number</b> Addition and Subtraction Multiplication and Division	<b>Fractions</b>	<b>Measurement</b>	<b>Geometry</b> Properties of shapes Position and direction	<b>Statistics</b>
<b>Y5</b>	<b>Number</b> Number and Place Value Addition and Subtraction	<b>Number</b> Addition and Subtraction Multiplication and Division	<b>Fractions</b> Fractions, decimals and percentages	<b>Measurement</b>	<b>Geometry</b> Properties of shapes Position and direction	<b>Statistics</b>
<b>Y6</b>	<b>Number</b> Number and Place Value Addition and Subtraction Multiplication and Division	<b>Number</b> <b>Fractions</b> Fractions, decimals and percentages	<b>Number</b> Ratio and proportion Algebra <b>Measurement</b>	<b>Geometry</b> Properties of shapes Position and direction	<b>Statistics</b>	Revision