

**Mission Statement Motto:** *Building relationships with God and each other, working hard in faith and hope to give our best in all things*  
*Respect, Honesty, Tolerance, Justice, Forgiveness*

### **Holy Cross Catholic Primary School** **Intent, Implementation and Impact**



### **Subject – Mathematics**

#### **Intent**

At Holy Cross Primary School we understand the importance of our children being confident to reason and explain how they have solved a problem. Consequently, mathematical dialogue is a crucial part of our curriculum. From Reception through to Year 6, we promote talking in maths, using mathematical vocabulary and using full sentences.

The intention of our maths curriculum 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. Our curriculum allows children to better make sense of the world around them, relating the pattern between mathematics and everyday life. Our policies, resources and schemes support our vision e.g. our calculations policy, our Teaching for Mastery approach, Power Maths planning and textbooks, White Rose planning and resources, Numberblocks and NCETM spines.

We aim to:

- Develop children's enjoyment of maths
- Teach a rich, balanced and progressive curriculum using Maths to reason, problem solve and develop fluent conceptual understanding in each area.
- Use representations to expose underlying structures and to challenge through depth of reasoning rather than content coverage.
- Ensure that children have a deep understanding of mathematical concepts, methods, and relationships between the different areas of maths, such as addition, subtraction, division and multiplication.
- Provide opportunities for children to build a conceptual understanding of maths before applying their knowledge to everyday problems and challenges.
- Ensure that all teachers begin each unit of maths by starting with the concept, using materials such as diennes and numicon, before moving onto calculation methods, using real life scenarios.
- Ensure that children can explain the 'hows' and 'whys' of maths. Through reasoning and higher order questioning, children are able to generalise and justify their thinking. Teachers promote reasoning during Maths lessons, through using carefully chosen questions e.g.: \_\_\_\_\_ thinks that, \_\_\_\_\_. Do you agree? Explain your answer. Is it always true, sometimes true or never true that \_\_\_\_\_? Can you spot the mistake? Explain why they are wrong.
- Ensure that real life problem-solving activities are planned into weekly maths learning. We also plan for mathematical activities to have a problem-solving element throughout the use of daily challenges.
- Develop children's ability to work both independently and collaboratively as part of a team to ensure that by the end of Key Stage Two, children will leave our school prepared for the next step in their mathematical education

The mapping of Mathematics across school shows clear progression in line with age related expectations. Children who are identified as SEND or underachieving are supported, revisiting learning where needed.

Mathematics in our school is enhanced by our individual class working walls designed to aid children through each topic, through our TT Rockstars competitions and also in our collaboration with external organisations such as Maths Hub.

Teachers and governors are kept regularly informed of developments in our frequently reviewed curriculum. Teachers are supported and aided in their roles ensuring confidence in the skills and facts they are required to teach. Lessons are child focused and maths is kept fun and current in school.

#### **Implementation**

At Holy Cross, we recognise that in order for pupils to progress in maths, they need to have lots of opportunities to use and apply their knowledge in everyday 'real life' situations, as well as using maths in the environment and in other subjects, such as Science, Computing or DT.

- We encourage our children to take on a challenge and apply their Maths to a variety of different problem-solving tasks and most importantly we want our children to have fun and enjoy Maths.

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- We use Power Maths, White Rose, Numberblocks and the NCETM spines, Ready to progress and Curriculum Prioritisation documents to expose children to various mathematical structures and representations, help them 'see the maths', make connections and deepen their understanding.
- The use of stem sentences is embedded throughout the school from Reception to help children clarify their thinking and develop a mental model so that they can confidently tackle abstract concepts.
- Discussion is essential to our learning and time is planned into lessons for this, task types are varied to suit different pupils and their learning preferences whilst reasoning in writing remains one of our key focuses. Investigative tasks are designed to allow pupils to follow lines of enquiry and develop their own ideas, justifying and proving their answers. Children work both collaboratively and independently solving problems, which require them to persevere and develop resilience.
- In EYFS children develop and deepen children's early number sense. To support the children's learning and understanding we use White Roses. Play is valued and we strive to inspire children with enthusiasm and a love of learning by creating a high quality, rich, stimulating and enabling learning environment that will capture their attention and lead to independent exploration of maths around us at home and school.
- Teaching throughout Key Stage One ensures that children in our school are confident to manipulate numbers up to 100. The Key Stage One curriculum provides opportunities for children to develop their competency in place value and the four operations. A high focus is placed on concrete, pictorial and mental strategies to equip children with a readiness for more abstract concepts to be introduced in Key Stage Two. Teachers model correct mathematical vocabulary in full sentences and children are expected to repeat and use this vocabulary to articulate their ideas.
- Teaching throughout Key Stage Two builds on the solid foundations of the previous key stage. Children are introduced to formal calculation methods in Year Three and these are developed and built on each year in line with age related expectations. The frequent opportunities to reason and problem solve in real life contexts, provided by teachers, develops their conceptual understanding and prepares them for the statutory end of key stage assessments. Children continue to use the concrete pictorial approach (CPA) to clarify misconception, prove and explain their understanding.
- We aim for all our children to enjoy maths and be successful at an appropriate level for their age and ability. Children of all ages should be practising their basic skills (e.g. number bonds, times tables) as much as possible at home, and using their maths skills in real situations such as finding change when shopping, telling the time and weighing out ingredients when cooking. Playing online maths games is another great way to improve their skills and speed and the children are able to do this by using Time Table Rockstars in school and at home.
- We assess children's learning at the end of each unit using Power Maths end of unit assessments, White Rose end of unit assessments. They also complete White Rose Arithmetic end of block assessments in the end of Autumn and Spring term and NFER in the Summer term. Children receive daily feedback in lessons to address misconceptions.
- CPD is important in maths to ensure everyone is confident in what they teach. We have regular maths focussed staff meetings. The maths lead attends various courses then feedback to staff to ensure that everyone including support staff is kept up to date with the latest information and good practice.
- Parents are informed of and encouraged to be involved in our school mathematics implementation through parent workshops, maths homework, TT Rockstars challenges, parent's evenings, termly grade cards and yearly reports. At the start of each academic year, all parents receive their child's Key Instant Recall Facts (KIRFs) which aims to develop children's fluency and mental maths skills as children are encouraged to learn by heart, key facts and information which they need to have instant recall of. Each half term, children focus on a Key Instant Recall Fact (KIRF) to practise and learn at home for the half term. Suggested activities and websites are also included with this pack. Teachers are also all available for parents to speak to both before and after school.
- For the academic year of 2022-2023 we will use 'Mastering Number' in Reception and KS1 and 'Fluent in Five' in KS2 to further develop children's arithmetic and mental recall fluency throughout the school.

**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 Maths is fun and it is OK to be 'wrong' because the journey to finding an answer is most important. Our children have a growth mindset and they make measurable progression against their starting points. Our feedback and interventions are supporting children to strive to be the best mathematicians they can be ensuring a greater proportion of children are on track. Children 'have a go' and choose the equipment they need to help them to learn along with the strategies they think are best suited to each problem. Children are developing skills in being articulate and are able to verbally, pictorially and in written form reason well. Summative assessment takes place at the end of each term and children's progress and attainment is discussed with senior leaders in pupil progress meetings. Formative assessment takes place on a daily basis and teachers adjust planning accordingly to meet the needs of their class. Attainment and outcomes in maths have a prominent focus at our school. The teaching of maths is monitored regularly by the Head Teacher and maths lead

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through lesson observations, book scrutinies, pupil progress meetings with the teachers as well as pupil voice interviews with children.

**End of KS2 overtime**

	Maths					
	EXS			GDS		
	HC	T	N/A	HC	T	N/A
2017	73.3	77.1	75.1	26.7	17.3	20.5
2018	90	78.4	76	23.3	20.8	21.8
2019	86.2	76.2	75.6	37.9	20.5	21.7

2022

**End of KS1**

	All				Disadvantaged	
	ARE		GD		ARE	GD
	HC	Nat	HC	Nat		
Reading	73	78	17	18	33	33
Writing	70	66	13	8	33	33
Maths	73	75	23	15	67	33
Combined	60	54	10	6	33	33
GPS	57		17		33	33
RE	80		17		33	33
Science	83	75			67	0

**End of KS2**

	All				Disadvantaged	
	ARE		GD		ARE	GD
	HC	Nat	HC	Na		
Reading	90	74	21		100	13
Writing	72	69	10		75	0
Maths	83	71	17		88	13
Combined	66	59	10		88	0
GPS	82	72	21		100	13
RE	79		28		88	25
Science	86	79			100	25

**Reading, Writing and Maths Combined – EXS or better**

**Subject Overview – End of Year Actual Data**

	ARE					GD				
	R	W	M	C		R	W	M	C	
Year 1	73	70	73	60		17	13	23	10	
Year 2	67	67	67	60		30	7	13	3	
Year 3	83	73	77	67		33	13	20	7	
Year 4	67	63	63	60		17	7	13	7	
Year 5	80	57	80	57		30	13	27	13	
Year 6	90	72	83	66		21	10	17	10	

EYFS – 72.4%

Phonics –

Year 1 – 57%

Year 2 – 90%