Holy Rood Catholic Primary School, Swindon

Maths Policy

School Vision:

Belong

At Holy Rood Catholic Primary School we will provide a nurturing and inclusive environment enthused by the Spirit of Christ to enable everyone to make a positive contribution, both to the school and the wider community. We will show love, compassion and respect for others.

A sense of unity will be created by forming relationships that are based on trust, loyalty, forgiveness and acceptance; we will endeavour to act justly and be peacemakers as Christ's disciples, inspired by the Gospel values.

We will encourage a sense of responsibility and help children learn to appreciate God's world around them through reflection, mission, prayer, healing and peace.

Learn

We resolve to develop a sense of awe and wonder at God's creation for our children - where creativity flourishes and everyone is inspired to learn, demonstrating a curiosity about the world around them.

We will strive to ensure that all of our learners are able to face new challenges with confidence, in a Christian learning environment where informed risk taking and a resilient attitude are welcomed, encouraged and achieved.

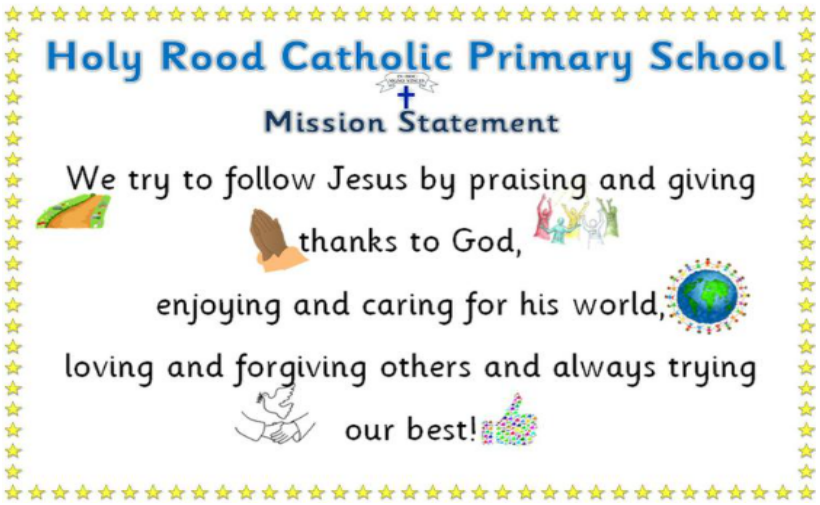
Our positive and enthusiastic approach to teaching and learning will motivate every person. Each will know that they are uniquely loved by God. We will continue to enjoy our learning and reflect on our efforts and achievements, inspiring us to always try our best.

Achieve

The children will be determined in their daily challenges, gaining confidence in their own ability, imagining what they could achieve with continued effort and commitment and working to fulfil the exclusive plan God has for each of them.

By fully engaging in all aspects of school, children will go on to accomplish as ambitious and competent individuals, always striving to achieve their full potential and positively participating in God's world.

Children's Mission Statement:



Maths@HolyRoodPrimary

Belief + Hard Work + Understanding = Success

Our Maths Vision:

At Holy Rood, we believe that mathematics is an important, creative discipline that helps us to understand and change the world. We want all pupils at Holy Rood to experience the beauty, power and enjoyment of mathematics and develop a sense of curiosity about the subject.

In order to achieve this, we foster positive 'can do' attitudes, believe all children can achieve in mathematics and teach for **secure and deep understanding** of mathematical concepts. We use mistakes and misunderstandings as an essential part of learning and provide challenge through rich and sophisticated problems before acceleration through new content.

Using a teaching for mastery approach, each mathematics lesson will incorporate the 'Fab Four' components to ensure each session has one 'KITE' so that all children will fly:

+ Key Learning Point:

The mathematics Curriculum is based around a set of 'themes' and sequences of lessons are designed and taught using **small, manageable** 'Key Learning Points.'

+ Intelligent Practice:

Mathematics lessons focus on developing conceptual understanding, challenging thinking by solving familiar and unfamiliar problems and **avoiding mechanical repetition.**

+ The answer is only the beginning:

Solutions are shared, explained and discussed to deepen understanding.

+ Examples and non-examples:

Tasks are designed using **variation theory**. Opportunities to vary 'What it is' (standard and non-standard), 'what it's not,' and apply understanding to solve problems and make connections.

Curriculum Intent: Skills

We aim for all pupils to:

- ✓ Become fluent in the fundamentals of mathematics (see year by year Curriculum Maps) so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- ✓ Solve problems by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios.
- ✓ Reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.
- ✓ Have an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently and accurately.

Curriculum Implementation:

Key Stage One:

Mathematics Lessons: Teach Up M/T/W/T/F (45 mins)		**Maths On Track Meetings: Number Sense M/T/W/T/F (20 mins)**
'Learning Together'	*'Support & Challenge'*	Number Sense Sessions *Daily Number Fluency*

Year 3:

Mathematics Lessons: Teach Up M/T/W/T/F (45 mins)		**Maths On Track Meetings:** **Autumn Term: Number Sense M/T/W/T (25 mins)** **Keep Up Friday (25 mins)** **Spring Term Onwards: Keep Up M/T/W/T/F (25 mins)**
'Learning Together'	*'Support & Challenge'*	Autumn Term: Number Sense Sessions *Daily Number Fluency* Spring Term Onwards: Deliberate Practice Sessions *Arithmetic/Intervention/Practice*

Year 4-6:

Mathematics Lessons: Teach Up M/T/W/T/F (45 mins)		**Maths On Track Meetings: Keep Up M/T/W/T/F (25 mins)**
'Learning Together'	*'Support & Challenge'*	Deliberate Practice Sessions *Arithmetic/Intervention/Practice*

Mathematics Lessons

At Holy Rood, each lesson focuses on a manageable step of new learning (Key Learning Point) based on the National Curriculum statements. The 45 minute, focused sessions allow our children to 'linger longer' on mathematical concepts in order to gain a deep and secure understanding of the new learning.

Typical Lesson design:

1) Recap It: Review of last lesson's small step. Share a multiple choice problem, designed to address common misunderstandings as a class, and discuss which answer is correct and how they know. Use questioning to allow children the opportunity to reason why other options are incorrect, as well as how they know what the correct answer is, linking back to previous learning and the last lesson's maths motto.

2) Hook It: Introduction

3) Teach It: Live modelling of the new learning with explicit use of potential misunderstandings, generating a '**maths motto'** for the session to display on the working wall.

4) Practise It: All children practise together. Assessment for learning is used to provide effective **support and challenge**.

5) Do It: Up to six questions, at least two of which provide the children with a 'bump in the road' of their learning journey, ensuring that they have a sound understanding of *'What it is and what it's also'* **Challenge 1: Procedural Fluency**

6) Secure It: 1 or 2 Misunderstandings (Correct the mistake Colin/Coco has made and explain WHY) **Challenge 2: Conceptual Understanding**

7) Deepen It: Apply understanding to solve new problems **Challenge 3: Mathematical Thinking**

8) Review It: Lesson Recap: 'maths motto' and key vocabulary to be displayed.

MathsOnTrack (MOT) Meetings

In order to provide our children with regular opportunities to revisit areas of learning in mathematics, we have daily MOT meetings which are separate to the maths lesson. These sessions happen on a daily basis, ensuring regular application of key number fluency/ arithmetic skills, as well as the deliberate practise of skills previously learnt/currently being learnt if same day intervention is required.

Although teachers use their assessment for learning to decide what the main focus for a MOT session should be (if same day intervention is required linked to the current learning), the intended structure in KS2 is as follows:

Day 1: Arithmetic

Day 2: Arithmetic

Day 3: Deliberate Practice: Past and Present

Day 4: Deliberate Practice: Past and Present

Day 5: Fact Friday

Any independent worksheets completed during the MOT sessions will be recorded and filed in MOT folders, unless it directly links with work from the maths lesson, in which case it should be recorded in maths books so intervention and progression can be seen.

Planning:

To support teachers with the planning of the maths lessons, Holy Rood follows the Curriculum Progression documents provided by the 'Can Do Maths Club'.

The Can Do Maths Club resources are then used to plan out each unit of work, identifying the manageable steps and suggested tasks that can be used in each lesson to deepen children's understanding, following the 'Do It, Secure It, Deepen It' process.

Teachers also log on to the Can Do Maths Club online (www.buzzardpublishing.com) where they can watch 'Subject Expertise Tutorials' which are videos of maths consultants discussing and modelling how they would teach each concept and what resources could be used.

Teachers' weekly planning is recorded and details all of the above, as well as the key vocabulary and resources needed for each session. It is expected that teachers will have an agreed expectation of what answers to accept in response to the 'Secure It' questions and that these incorporate the children's 'maths motto' for the session where appropriate.

Presentation in books:

At Holy Rood, there is an expectation that children will write in their mathematics books in pencil, using one digit per square. The short date will be written and underlined before each new piece of work is completed or stuck in.

The Key Learning Point for the lesson will be at the top of the activity for that day. From the summer term of Year 2, there will be a circle for the children to complete a smiley face to show how well they felt they understood the key concept and a box to tick if they feel they are ready to move on to the next step in learning (**See Appendix 2**).

'Do It' questions are displayed first followed by 'Secure It' questions which will be presented with lines for children to write their answers if needed. 'Secure It' questions are progressively scaffolded to support children to show the correct answer and explain the misconception (**See Appendix 3**). The 'Deepen It' question will be on a separate piece of paper, which the children can progress on to once they have completed the first two sections.

At the end of each unit, children will complete the 'Remember It' Can Do end of unit assessments so that teachers can assess how well they can apply their knowledge to different objectives. The results will then be entered in to a tracking sheet to provide question level analysis to inform teacher assessment and next steps in teaching and learning.

Marking:

All teacher marking will be completed in green pen. This may be done live in the lesson alongside the child, or after the lesson has been completed. Correct answers will be ticked and incorrect answers will be highlighted in green or marked with a dot, with further feedback given to ensure the child can rectify their misunderstanding when needed. If the children go back to their work to make any corrections, this will be completed in blue pen. If the children

complete all of their 'Do It' work correctly, then this will be stamped with a 'Maga Mathematician' stamp.

Peer and self-marking is acceptable (where appropriate) and children should complete this in a blue pen, but this must be checked by the teacher and agreed with by a stamp, tick or comment.

Working Walls:

All classrooms will have a maths working wall with consistent yellow backing colour to match maths books and MOT folders. Worked examples and models from maths lessons should be on display on the working wall, and this should be changed in line with new maths topics and learning. Children's 'maths motto' from the lesson should also be displayed on the working wall for children to use to guide their maths learning and as support for their 'Secure It' questions.

The maths working walls will also have a vocabulary section. Vocabulary linked to the current mathematical topic should be on display and referred to throughout maths lessons. Teachers should follow the maths vocabulary from the 'CanDo' resources which link to their current unit being taught. This ensures vocabulary is progressive and appropriate to the year group.

Appendix 1: Weekly planning template

Week beg:	Teacher/s:	Year Group:	Subject: Maths
Pre-requisites			
Key Learning Points	**Possible misunderstandings**	**Mathematical language**	

Day	Main lesson LO	Teacher input *Hook! What will you model, what it is/what it is also, careful number choice, mixed partners, what do you notice? Generalisations and sentence stems*	Activities	Resources
Mon			**Do It:** *Practise independently e.g. three examples of what it is and two of what it is also* **Secure It:** *What it is not – plan for the misconception. Chn attempt independently then AfL for class discussion* **Deepen It:** *(Some challenges to apply learning e.g. this is the answer, what was the question? Empty box questions, contextualised problems, all possibilities etc)*	
Tues			**Do It:** *Practise independently e.g. three examples of what it is and two of what it is also* **Secure It:** *What it is not – plan for the misconception. Chn attempt independently then AfL for class discussion* **Deepen It:**	

			(Some challenges to apply learning e.g. this is the answer, what was the question? Empty box questions, contextualised problems, all possibilities etc)	
Wed			**Do It:** *Practise independently e.g. three examples of what it is and two of what it is also* **Secure It:** *What it is not – plan for the misconception. Chn attempt independently then AfL for class discussion* **Deepen It:** *(Some challenges to apply learning e.g. this is the answer, what was the question? Empty box questions, contextualised problems, all possibilities etc)*	
Thur			**Do It:** *Practise independently e.g. three examples of what it is and two of what it is also* **Secure It:** *What it is not – plan for the misconception. Chn attempt independently then AfL for class discussion* **Deepen It:** *(Some challenges to apply learning e.g. this is the answer, what was the question? Empty box questions, contextualised problems, all possibilities etc)*	
Fri			**Do It:** *Practise independently e.g. three examples of what it is and two of what it is also* **Secure It:** *What it is not – plan for the misconception. Chn attempt independently then AfL for class discussion*	

			Deepen It: *(Some challenges to apply learning e.g. this is the answer, what was the question? Empty box questions, contextualised problems, all possibilities etc)*	

Appendix 2: Daily 'kite'

I can recall and use division facts for the 4 times table.	□ ○

Appendix 3: Example task sheet

Do it

12 ÷ 4 = _____

20 ÷ 4 = _____

28 ÷ 4 = _____

_____ = 36 ÷ 4

12 = _____ ÷ 4

Secure it

Coco thinks that …

20 ÷ 4 > 20 ÷ 2

But she is **incorrect**. Finish the sentence below to explain why.

The correct answer is:

_____

Coco is incorrect because

_____

_____

_____

_____

Appendix 3: EYFS weekly planning template

Week beg:	Teacher/s:	Year Group: EYFS	Subject: Maths
Development Matters Learning Statements	Small Steps	Mathematical language/*Key Questions*	
		Enhanced Provision	
Pre-Requisites	Resources		

Day	Main lesson LO	Teacher input	Assessment Notes
1			
2			
3			

Appendix 4 – EYFS Marking Codes

EYFS Marking Codes

All work must be dated and coded.

The codes that the adults use in EYFS when annotating work are:

CI - child-initiated activity. This is an activity which has been set up and organised by the child themselves.
AI – Adult initiated. This is an activity set up by an adult but not led by an adult.
AL - Adult led. This is an activity set up and led by an adult.
I – independent work.
WS - with support. Please make a comment to explain what support was given.
VF—Verbal feedback.

/ → Next step stampers or a drawn arrow should be used to indicate the child's next step.


A yellow highlighter is used to indicate where a child has achieved a learning objective/ next step. This is to be introduced in the summer term to support so that the children are familiar with it when they move into Year 1.

Appendix 5 – EYFS: Objective Led Planning Example

Week Beginning:			**Area of Learning: Maths—More/fewer**
Objective *What are we trying to achieve?*	Name (Tick when observed)	Objective Achieved	Evidence/Notes (Note down individual next step)
To touch count moveable objects to 5 To know that the last number counted is how many are in the set. To say which group has more when comparing 2 sets.			
To touch count moveable objects to 10 To know that the last number counted is how many are in the set. To say which group has more when comparing 2 sets.			
To use the language more and fewer to describe 2 sets.			
To use the language more and fewer when comparing 2 sets of objects. To work out how many more there are when comparing 2 sets.			