Holy Family RC Primary School

Maths Curriculum

Intent/CLM

Underpinning the maths curriculum is the understanding that faith inspires us in all that we do and the use of Maths as a tool to educators in religious education is a foundation stone of the Maths curriculum.

At Holy Family we want pupils to see mathematics as a highly interconnected subject. To do this we use real life occurrences as an introduction to the world of mathematics. At Holy Family we want our pupils to use a concrete, pictorial and abstract approach to maths as a way of embedding mathematical knowledge. Pupils are given opportunities to work independently and in small mixed ability groups to explore mathematical concepts.

The reason for following White Rose, our maths scheme of work (implemented September 2024) is to adopt a mastery approach to maths throughout the school. This will mean that all pupils will have a broad grasp of mathematics, being able to employ a range of strategies to solve a variety of problems with confidence. Pupils at Holy Family become fluent in the fundamentals of mathematics, reason mathematically, and solve problems by applying mathematical skills to a variety of situations.

Intent

At Holy Family we want pupils to see mathematics as a highly interconnected subject. To do this we use real life occurrences as an introduction to the world of mathematics. At Holy Family we want our pupils to use a concrete, pictorial and abstract approach to maths as a way of embedding mathematical knowledge. Pupils are given opportunities to work independently and in small mixed ability groups to explore mathematical concepts. Maths Journals are used by pupils to solidify and demonstrate their own level of understanding and to enhance reasoning.

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Implementation

At Holy Family, we teach mathematics daily to ensure children are immersed in the curriculum. We supplement this with additional daily arithmetic sessions to increase fluency and knowledge retention.

Year 4 complete targeted timestable sessions throughout the week to enable fluency and prepare them for the national times table test.

High quality teaching meets the needs of individuals through appropriately targeted lessons, which provide support and challenge.

Progressive maths vocabulary is modelled by staff and shared with children, both verbally and on their classroom working walls. These working walls are used to support methods and critical thinking during lessons.

Progressive maths counting occurs at the beginning of each maths lesson.

Impact

Our maths curriculum enables children to become confident, fluent problem-solvers and increasingly accurate mathematicians.

Pupils can talk confidently about mathematics using accurate vocabulary, and can also apply their mathematical knowledge to problem solving and other areas of the curriculum.

At Holy Family, children are encouraged to be resilient, independent and creative learners. The children at Holy Family enjoy mathematics, and are prepared for the next stage of their learning by the end of each academic year.

Children live mark their own work during lessons, which is then checked over by the teacher. This allows the children to self-assess and understand the importance of AfL to progress their learning journey.

Whole school maths progression

Nursery

Mathematics	Comparison 1 Shape, space and measure 1 Pattern 1 Counting 1	Counting 2 Subitising 1 Pattern 2 Shape, space and measure 2	Subitising 2 Counting 3 Shape, space and measure 3 Pattern 3	Counting 4 Shape, space and measure 4 Subitising 3 Comparison 2	Pattern 4 Shape, space and measure 5 Pattern 5 Subitising 4	Counting 5 Pattern 6 Counting 6 Comparison 3

Reception

Mathematics	Match, sort & compare Talk about measure and patterns	It's me 1,2,3 Circles & Triangles 1,2,3,4,5 Shapes with 4 sides	Alive in 5 Mass & capacity Growing 6,7,8	Length, height & time Building 9 & 10 Explore 3D shapes	To 20 & beyond How many now? Manipulate, compose & decompose Sharing & grouping	Sharing & grouping Visualise, build & map Make connections Consolidation

Year 1

White Rose	NUMBER: Place Value within 10 NUMBER: Addition and subtraction within 10.	NUMBER: Addition and subtraction within 10. GEOMETRY: Shape	NUMBER – Place value within 20 NUMBER – addition and subtraction within 20	NUMBER – Place value within 50 MEASURMENT: Length and height. MEASURMENT: Mass & volume	NUMBER – Multiplication & Division NUMBER: Fractions Block ? GEOMETRY: Position & Direction	NUMBER: Place value within 100 MEASUREMENT: Money MEASUREMENT: Time

Year 2

White Rose Maths	NUMBER: Place Value NUMBER: Addition and subtraction	NUMBER: Addition and subtraction GEOMETRY: Shape	MEASUREMENT: Money NUMBER: Multiplication & division	NUMBER: Multiplication & division MEASURMENT: Length & Height MEASURMENT: Mass, capacity & temperature	NUMBER: Fraction MEASURMENT: Time	STATISTICS GEOMETRY: Position & Direction

Year 3

White Rose Maths	NUMBER: Place Value NUMBER: Addition & Subtraction	NUMBER: Addition & Subtraction NUMBER: Multiplication & Division A	NUMBER: Multiplication & Division B MEASURMENT: Length & Perimeter	NUMBER: Fractions A MEASURMENT: Mass & Capacity	NUMBER: Fractions B MEASUREMENT: Money MEASUREMENT: Time	MEASUREMENT: Time GEOMETRY: Shape STATISTICS

Year 4

White Rose Maths	NUMBER: Place Value NUMBER: :Addition & Subtraction	MEASURMENT: Area NUMBER: Multiplication & Subtraction A	NUMBER: Multiplication & Division B MEASURMENT: Length & Perimeter NUMBER: Fractions	NUMBER: Fractions NUMBER: Decimals A	NUMBER; Decimals B MEASURMENT: Money MEASURMENT: Time	GEOMETRY: Shape STATISTICS GEOMETRY: Position & Direction

Year 5

White Rose Maths	NUMBER: Place Value NUMBER: Addition & Subtraction Number: Multiplication & Division A	NUMBER: Multiplication & Division A NUMBER: Fractions A	NUMBER: Multiplication & Division B NUMBER: Fractions B NUMBER: Decimals & Percentages	NUMBER: Decimals & Percentages MEASURMENT: Perimeter & Area STATISTICS	GEOMETRY: Shape GEOMETRY: Position & Direction NUMBER: Decimals	NUMBER: Negative Numbers MEASURMENT: Converting Units MEASURMENT :Volume

Year 6

White Rose Maths	NUMBER: NUMBER:	NUMBER: MEASURMENT:	NUMBER: NUMBER: NUMBER:	NUMBER: MEASUREMENTS: STATISTICS:	GEOMETRY: GEOMETRY: Themed projects,	Themed projects, consolidation & problem solving

White Rose EDUCATION

Year 6 move away from the White Rose Scheme to focus on SATS revision and intervention sessions.

Whole school arithmetic progression

Holy Family Catholic Primary School

Maths Progression of Mental Arithmetic

	Counting/Using number	Number recognition	Applying knowledge to mathematical problems
EYFS	3-4 • Recites numbers past 5. • Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Say one number for each item in order: 1,2,3,4,5. • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Show 'finger numbers' up to 5. Reception • Count objects, actions and sounds. • Subitise. • Count beyond ten.	3-4 • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Reception • Link the number symbol (numeral) with its cardinal number value.	3-4 • Experiment with their own symbols and marks as well as numerals. • Solve real world mathematical problems with numbers up to 5. • Compare quantities using language: 'more than', 'fewer than'. Reception • Compare numbers. • Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10. • Automatically recall number bonds for numbers 0–10.
	Rapid recall	Mental strategies	Mental calculations
Year 1	• All pairs of numbers with a total to 10 e.g. 3+7 • Addition facts for all numbers to any number to 10. • Subtraction facts for all numbers to any number to 10. • Addition doubles of all numbers to at least 10+10 • Halving facts of even numbers to 20.	• Count on or back in ones, twos, fives and tens • Reorder numbers in calculation • Begin to bridge through 10, and later 20, when adding a single-digit number • Use known number facts and place value to add pairs of single-digit numbers • Use known number facts and place value to subtract pairs of single-digit numbers	• Add a single digit to or from a single digit , without crossing 10 e.g. 4 + 5 • Subtract a single digit to or from a single digit , without crossing 10 e.g. 8-3 • Add or subtract a single digit to or from 10
Year 2	• One and two more/ less than any number up to 100. • 10 more/less of multiples of 10 • 5 more/ less of multiples of 5 • Addition and subtraction facts for all numbers to at least 10 All pairs of numbers with a total of 20 e.g. 13 +7 • All pairs of multiples of 10 with a total of 100 e.g. 30+70 • Multiplication facts for the 2 and 10 times tables and corresponding division facts • Double of all numbers to ten and the corresponding halves • Multiplication facts up to 5x5 e.g. 4x3 • Know 10x, 2x, 5x tables • Count forwards and backwards in 3's to 36 • Know inverse ÷ for 10, 2 and 5	• Add 9 to single-digit numbers by adding 10 then subtracting 1 • Subtract 9 by subtracting 10 then adding 1 • Identify near doubles using doubles already know • Use patterns of similar calculations • Count on or back in tens or ones • find a small difference by counting up from the smaller to the larger number • reorder numbers in a calculation • add three small numbers by putting the largest number first and/or finding a pair totalling 10 • partition additions into tens and units then recombine bridge through 10 or 20 • use known number facts and place value to add or subtract pairs of numbers • partition into '5 and a bit' when adding 6, 7, 8 or 9 • add or subtract 9, 19, 11 or 21 by rounding and compensating • identify near doubles • use patterns of similar calculations • use the relationship between addition/subtraction • use knowledge of number facts and place value to multiply or divide by 2, 5 or 10 • use doubles and halves and halving as the inverse of doubling	• Add or subtract a single digit to or from a 'teens' number, without crossing 20 or 10 e.g. 13 + 5, 17 – 3 • Double of all numbers to 10 e.g. 8+8, double 6 • add or subtract any single-digit to or from any two-digit number, without crossing the tens boundary, e.g. 62 + 4, 38 – 7 • add or subtract any single-digit to or from a multiple of 10, e.g. 60 + 5, 80 – 7 • add or subtract any 'teens' number to any two-digit number, without crossing the tens boundary, e.g. 23 + 14, 48 – 13 • Find what must be added to any two-digit multiple of 10 to make 100, e.g. 70 + ? = 100 • Add or subtract a multiple of 10 to or from any two-digit number, without crossing 100, e.g. 47 + 30, 82 – 50 • subtract any two-digit number from any two-digit number when the difference is less than 10, e.g. 78 – 71 or 52 – 48 • doubles of all numbers to at least 15, e.g. double 14 • double any multiple of 5 up to 50, e.g. double 35

Whole school arithmetic progression

			• halve any multiple of 10 up to 100, e.g. halve 50
Year 3	• Addition and subtraction facts for each number to 20, e.g. 13 + 4 • sums and differences of multiples of 10, e.g. 70 + 20 or 80 – 30 • number pairs that total 100, e.g. 46 + 54 • multiplication facts for the 2, 3, 4, 5, 6 and 10 times tables and the corresponding division facts	• count on or back in tens or ones • find a small difference by counting up from the smaller to the larger number • reorder numbers in a calculation • add three or four small numbers by putting the largest number first and/or by finding pairs totalling 9, 10 or 11 • partition into tens and units then recombine • bridge through a multiple of 10, then adjust • use knowledge of number facts and place value to add or subtract pairs of numbers • partition into '5 and a bit' when adding 6, 7, 8 or 9 • add or subtract mentally a 'near multiple of 10' to or from a two-digit number • identify near doubles • use patterns of similar calculations • say or write a subtraction statement corresponding to a given addition statement • to multiply a number by 10/100, shift its digits one/two places to the left	• Find what must be added to any multiple of 100 to make 1000, e.g. 300 + ? = 1000 • add or subtract any pair of two-digit numbers, without crossing a tens boundary or 100, e.g. 33 + 45, 87 – 2 • add or subtract any single-digit to any two-digit number, including crossing the tens boundary, e.g. 67 + 5, 82 – 7 • Find what must be added to/subtracted from any two-digit number to make the next higher/lower multiple of 10. e.g. 64 + ? = 70, 56 - ? = 50 • subtract any three-digit number from any three-digit number when the difference is less than 10, e.g. 458 – 451, or 603 – 597 • Find what must be added to/subtracted from any three-digit number to make the next higher/lower multiple of 10, e.g. 647 +? = 650, 246 - ? = 240 • double any number to at least 20, e.g. double 18, and corresponding halves, e.g. halve 36; double 60, halve 120; double 35, halve 70; double 450, halve 900

		• use knowledge of number facts and place value to multiply or divide by 2, 5 or 10, 100 • use doubling or halving • say or write a division statement corresponding to a given multiplication statement	• multiply single-digit numbers by 10 or 100, e.g. 6 x 100 divide any multiple of 10 by 10, e.g. 60 ÷ 10, and any multiple of 100 by 100, e.g. 700 ÷ 100
Year 4	• Multiplication facts of the 2,3,4,5, 6, 7, 8, 9, 10,11 and 12 times tables • Division facts corresponding to tables of 2,3,4,5, 6, 7, 8, 9, 10,11 and 12 • Number fractions (including decimals) • recognise and show, using diagrams, families of common equivalent fractions • count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 • solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundreds	• count on or back in repeated steps of 1, 10 and 100 • count up through the next multiple of 10, 100 or 1000 • reorder numbers in a calculation • add 3 or 4 small numbers, finding pairs totalling 10 • add three two-digit multiples of 10 • partition into tens and units, adding the tens first • bridge through 100 • use knowledge of number facts and place value to add or subtract any pair of two-digit numbers • add or subtract 9, 19, 29, 11, 21 or 31 by rounding and compensating • add or subtract the nearest multiple of 10 then adjust • identify near doubles • continue to use the relationship between addition and subtraction • double any two-digit number by doubling tens first • use known number facts and place value to multiply or divide, including	• Find what must be added to any two-digit number to make 100, e.g. 37 + ? = 100 • add or subtract any pair of two-digit numbers, e.g. 38 + 85, 92 – 47 • find out what must be added to/subtracted from any two- or three-digit number to make the next higher/lower multiple of 100, e.g. 374 + ? = 400, 826 - ? = 800 • subtract any four-digit number from any four-digit number when the difference is small, e.g. 3641 – 3628, 6002 – 5991 • double any whole number from 1 to 50, e.g. double 36, and find all the corresponding halves, e.g. 96 ÷ 2 • double any multiple of 10 to 500, e.g. 380 x 2, and find all the corresponding halves, e.g. 760 ÷ 2, 130 ÷ 2 • double any multiple of 5 to 100, e.g. 65 x 2 • multiply any two-digit number by 10, e.g. 26 x 10

Whole school arithmetic progression

	• recognise and write decimal equivalents to , , • find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths • round decimals with 1 decimal place to the nearest whole number • compare numbers with the same number of decimal places up to 2 decimal places • solve simple measure and money problems involving fractions and decimals to 2 decimal places	multiplying and dividing by 10 and then 100 • partition to carry out multiplication • use doubling or halving • use closely related facts to carry out multiplication and division • use the relationship between multiplication and division	• divide a multiple of 100 by 10, e.g. 600 ÷ 10 • multiply any two-digit multiple of 10 by any single-digit number
Year 5	• multiplication facts up to 12 x 12 and corresponding division facts Derive: • sums and differences of decimals, e.g. 6.5 • 2.7 doubles and halves of decimals, e.g. half of 5.6	• count up through the next multiple of 10, 100 or 1000 • reorder numbers in a calculation • partition into hundreds, tens and units, adding the most significant digit first • use known number facts and place value to add or subtract pairs of three-digit multiples of 10 and two-digit numbers with one decimal place • add or subtract the nearest multiple of 10 or 100 then adjust • identify near doubles • add several numbers • develop further the relationship between addition and subtraction	• Add or subtract any pair of three-digit multiples of 10, e.g. 570 + 250, 620 – 380 • Find what must be added to a decimal fraction with units and tenths to make the next higher whole number, e.g. 4.3 + ? = 5 • add or subtract any pair of decimal fractions each with units and tenths, or each with tenths and hundredths, e.g. 5.7 + 2.5, 0.63 – 0.48 • subtract a four-digit number just less than a multiple of 1000 from a four-digit number just more than a multiple of 1000, e.g. 5001-1997
		• use factors • partition to carry out multiplication • use doubling and halving • use closely related facts to carry out multiplication and division • use the relationship between multiplication and division • use knowledge of number facts and place value to multiply or divide	• multiply any two- or three-digit number by 10 or 100, e.g. 79 x 100, 363 x 100 • divide a multiple of 100 by 10 or 100, e.g. 4000 ÷ 10, 3600 ÷ 100 • multiply any two-digit multiple of 10 y a single-digit, e.g. 60 x 7, 90 x 6 • double any whole number from 1 to 100, multiples of 10 to 1000, and find corresponding halves • find 50%, 25%, 10% of small whole numbers or quantities, e.g. 25% or £ • multiply any two-digit number by a single-digit, e.g. 34 x 6
Year 6	• multiplication and division facts involving decimals, e.g. 0.8 x 7 and 4.8 ÷ 6 • squares of numbers to 12 x 12 and the corresponding squares of multiples of 1 • cubed numbers to 12 x 12 x 12	• consolidate all strategies from previous years • use knowledge of number facts and place value to add or subtract pairs of three-digit multiples of 10 and two-digit numbers with one decimal place • add or subtract the nearest multiple of 10, 100 or 1000, then adjust • continue to use the relationship between addition and subtraction • use factors • Order factions and find relationships between numbers • partition to carry out multiplication • use doubling and halving, including decimals	• multiply or divide any whole number by 10 or 100, giving any remainder as a decimal, e.g. 47 ÷ 10 = 4.7, 1763 ÷ 100 = 17.63 • multiply and divide whole numbers and decimal numbers by 10, 100 and 1000 • find squares of multiples of 10 to 100 • find any multiple of 10% of a whole number or quantity, e.g. 70% of £20, 50% of 5kg, 20% of 2 metres

Maths in the Early Years

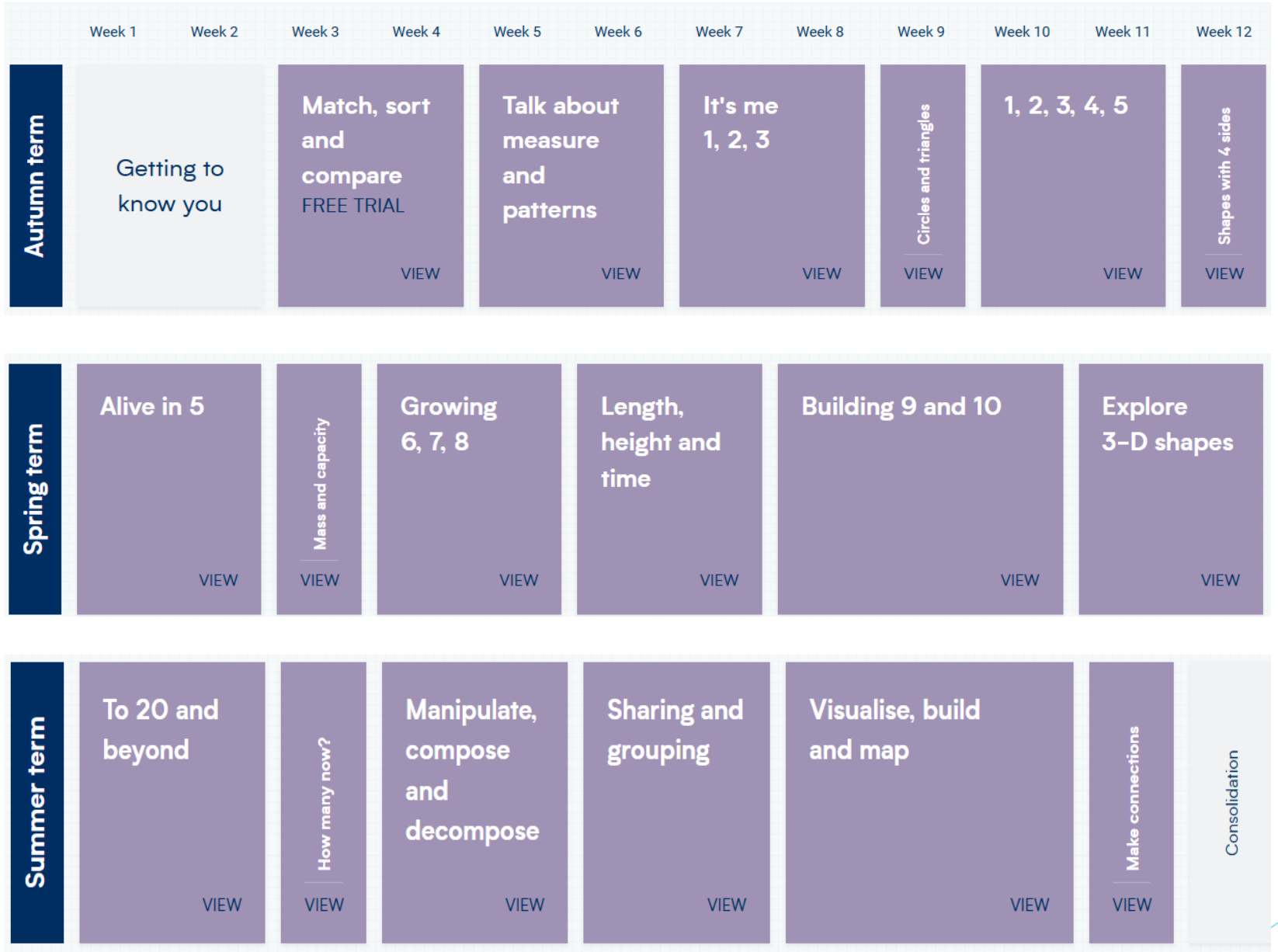
Nursery

Yearly overview

The yearly overview provides an at-a-glance progression of the mathematical areas and concepts throughout the nursery scheme. The 24 blocks can be accessed at any stage of children starting nursery. Timings are flexible to allow you to start the progression where developmentally appropriate as well as with children starting nursery in different intakes through the year or longer.

Comparison 1	Shape, space and measure 1	Pattern 1	Counting 1	Counting 2	Subitising 1
More than, fewer than, same	Explore and build with shapes and objects	Explore repeats	Hear and say number names	Begin to order number names	I see 1, 2, 3
Pattern 2	Shape, space and measure 2	Subitising 2	Counting 3	Shape, space and measure 3	Pattern 3
Join in with repeats	Explore position and space	Show me 1, 2, 3	Move and label 1, 2, 3	Explore position and routes	Explore patterns
Counting 4	Shape, space and measure 4	Subitising 3	Comparison 2	Pattern 4	Shape, space and measure 5
Take and give 1, 2, 3	Match, talk, push and pull	Talk about dots	Compare and sort collections	Lead on own repeats	Start to puzzle
Pattern 5	Subitising 4	Counting 5	Pattern 6	Counting 6	Comparison 3
Making patterns together	Make games and actions	Show me 5	My own pattern	Stop at 1, 2, 3, 4, 5	Match, sort, compare

Reception


Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Autumn term
Getting to know you
Match, sort and compare
FREE TRIAL
VIEW
Talk about measure and patterns
VIEW
It's me 1, 2, 3
VIEW
Circles and triangles
VIEW
1, 2, 3, 4, 5
VIEW
Shapes with 4 sides
VIEW
Spring term
Alive in 5
VIEW
Mass and capacity
VIEW
Growing 6, 7, 8
VIEW
Length, height and time
VIEW
Building 9 and 10
VIEW
Explore 3-D shapes
VIEW
Summer term
To 20 and beyond
VIEW
How many now?
VIEW
Manipulate, compose and decompose
VIEW
Sharing and grouping
VIEW
Visualise, build and map
VIEW
Make connections
VIEW
Consolidation

Flashback Four

At the beginning of each White Rose lesson the first activity that the children do is the Flashback Four. The purpose of this is to increase fluency and retention of knowledge. The Flashback Four includes prior learning. Below is an example of one from Year 3.

Flashback 4

Year 3 | Week 4 | Day 1

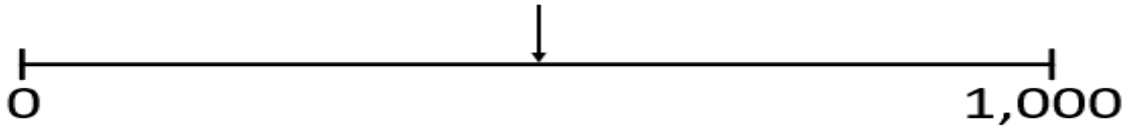
White Rose MATHS

2×1

1) Complete the number track.

	400	350		250	200

2) Estimate the number that the arrow is pointing to.



3) Write the number in numerals.

4) How many sides does a pentagon have?

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SMSC and British Values

SMSC	
Spiritual	Use imagination and creativity to explore ideas while learning mathematics by: identifying and applying patterns and rules to everyday problem-solving; writing own problems and challenges that use those patterns or rules.
Moral	Understanding the consequences of actions; e.g. if you perform a particular action to one number, will the same outcome apply to the other numbers? Is it always the case? 'Sometimes always, never' statements.
Social	Developing personal qualities and using social skills: working in pairs or groups to solve problems; perseverance when struggling to answer questions; not being afraid to try- it is ok to be wrong, it's not ok not to try; taking turns when playing maths games. Participating, co=operating and resolving conflicts: as above, but also 'X thinks ____, Y thinks ____, who is right?' type questions.
Cultural	Understanding and appreciating personal influences: taking into account other people's views and understanding how to express own views, e.g. how to explain to someone where they may have gone wrong in a question.

British Values in Maths	
Democracy	Take into account the views of others in shared activities. Voting when collecting data.
Rules and Law	Undertake safe practices, following class rules during tasks and activities for the benefit of all. Understand the consequences if rules are now followed. Understand that in maths rules apply, e.g. ODMAS< when calculating and using algebra.
Individual Liberty	Use maths to learn about different faiths and cultures around the world, e.g. looking at patterns/shapes within Islam/Hindu religions. To know that different time periods and cultures used different number systems e.g. Roman numerals.
Mutual respect and tolerance of those with different faiths and beliefs.	To behave appropriately, allowing all participants the opportunity to work effectively. Take turns and share equipment. Review each other's work respectfully. Work collaboratively on projects/problems, help and advise others.

Maths and Inclusion

Everyone can do Maths!

Each and every one of our children are on the same learning journey, with the same learning opportunities, throughout our school.

We recognise that children grasp concepts at different paces yet all children become masters of the curriculum, with those who rapidly grasp a concept delving deeper.

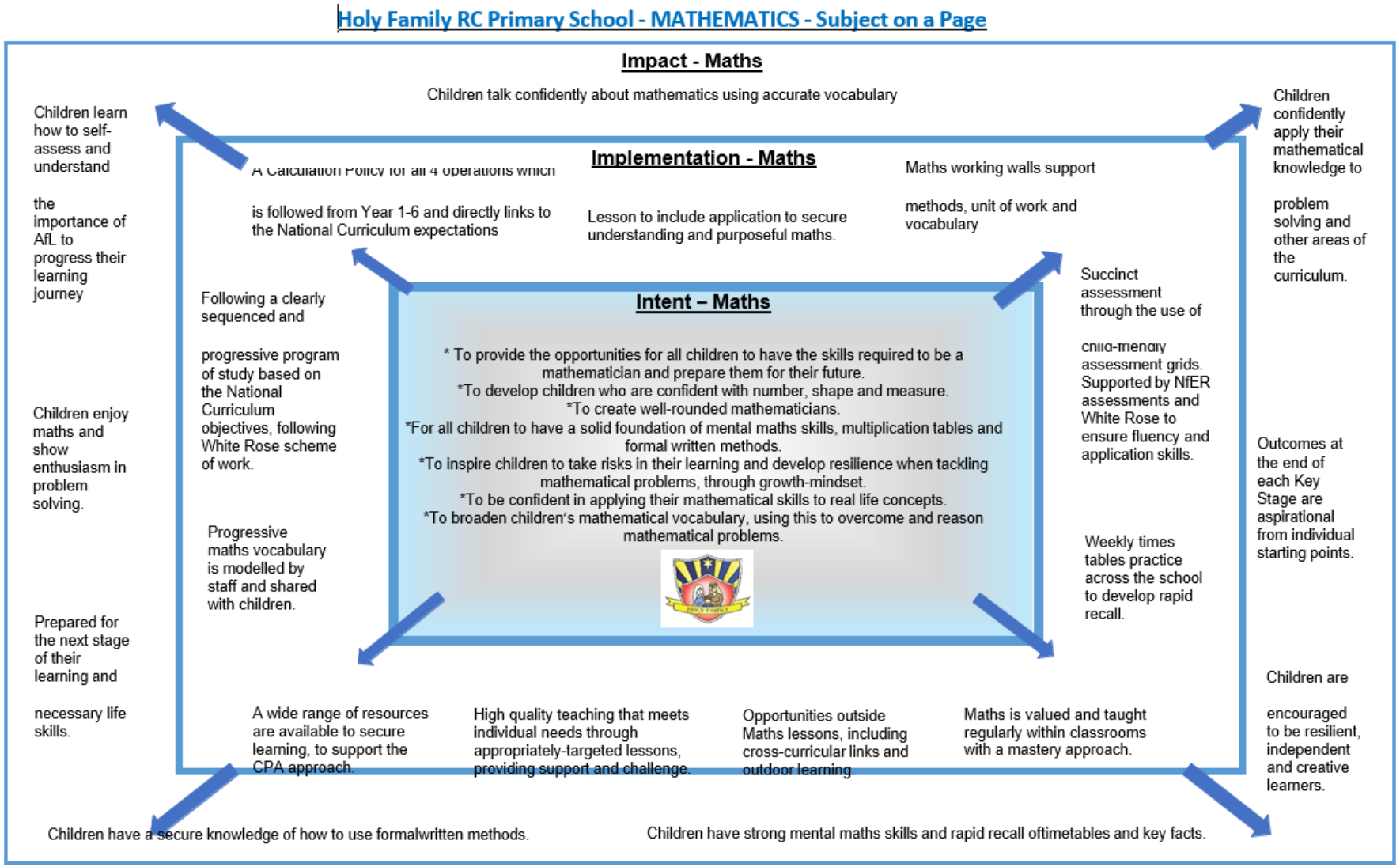
Maths and reading

We recognise the important role that a good vocabulary and reading comprehension plays in solving problems.

They help our children to understand the issues being presented to them by distinguishing between what is known and what is being asked.

This aids our children in being able to translate problems into mathematical models.

Maths on a page



I am a Holy Family Mathematician

Working wall

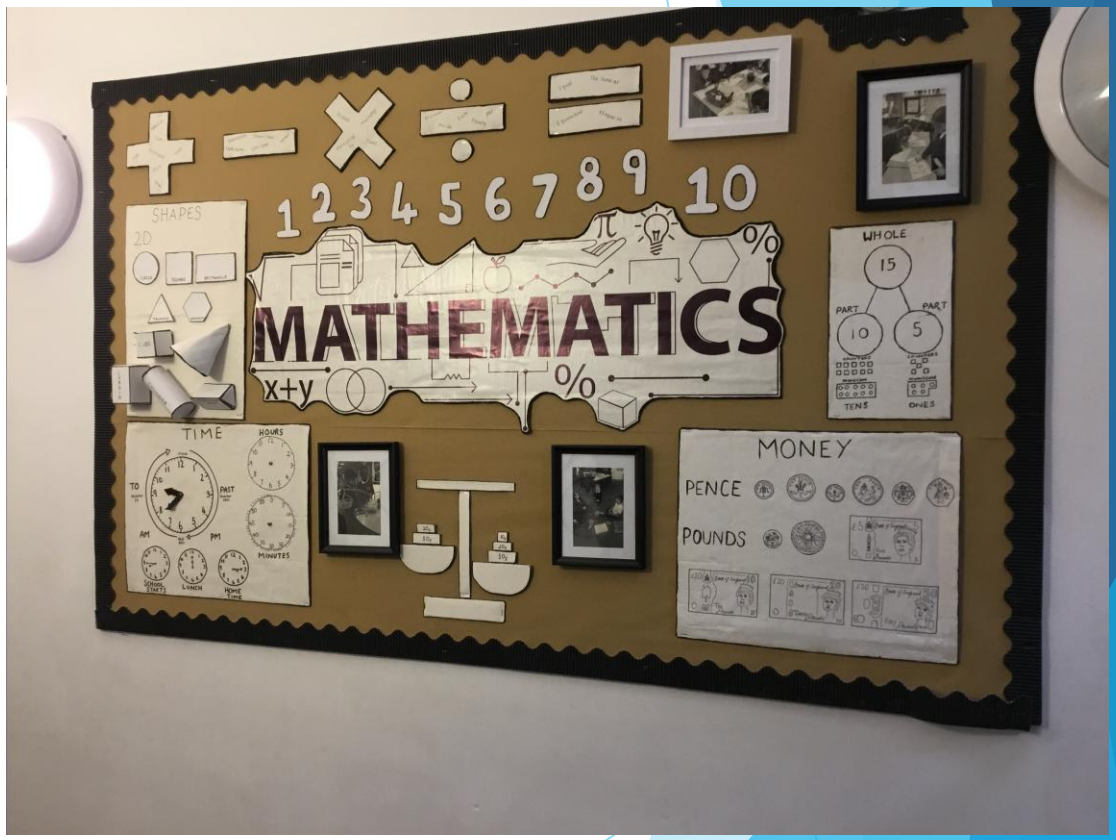
Topic title

MNP characters

Maths squares

vocabulary

Resources

Resource boxes available for every table group.

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