At Holy Trinity we develop our pupils declarative by teaching the mathematical facts, concepts and rules (**fluency**), the procedural knowledge by ensuring pupils know how to perform the steps in a process (**problem solving**) and the conditional knowledge by providing children with the ability to know when to use a procedure, skill or strategy (**reasoning**).

<u>Topic</u>	Reception	Year 1	Year 2	Year 3	Year 4	<u>Year 5</u>	Year 6
Place Value	Count verbally beyond 5. Count verbally beyond 10. Count verbally beyond 20. Accurately count items to 5 with one-to-one correspondence. Accurately count items to 10 with one-to-one correspondence. Correctly count sounds and actions, as well as objects. Show a secure understanding of the 'cardinal principle' (knows the last number reached when counting tells you the total). Subitise up to 3. Subitise up to 5. Show 'finger numbers' up to 5. Link numeral to amounts up to 5. Link numeral to amounts up to 10. Can use 'more than' and 'fewer than' to compare quantities. Can compare quantities up to 10 and say whether one is greater than, less than or the same as the other. Understand 'one more than/one less	(to 10) Sort objects. Count objects. Represent objects. Count, read and write forwards from any number 0 to 10. Count, read and writing backwards from any number 0 to 10. Count one more. Count one less. One to one correspondence to start to compare groups. Compare groups using language such as equal, more/greater, less/fewer. Introduce = , > and < symbols. Compare numbers. Order groups of objects. Order numbers. Ordinal numbers (1st, 2nd, 3rd). The number line. (to 20) Count forwards and backwards and write numbers to 20 in numerals and words. Numbers from 11 to 20. Tens and ones. Count one more and one less. Compare numbers. Order groups of objects. Order groups of objects. Compare numbers. (100) Counting to 100. Partitioning numbers. Comparing numbers. Comparing numbers. Comparing numbers. One more, one less.	Count objects to 100 and read and write numbers in numerals and words. Represent numbers to 100. Tens and ones with a part whole model. Tens and ones using addition. Use a place value chart. Compare objects. Compare numbers. Order objects and numbers. Count in 2s, 5s and 10s. Count in 3s.	Hundreds. Represent numbers to 1,000. 100s, 10s and 1s (2). Number line to 1,000. Find 1, 10, 100 more or less than a given number. Compare objects to 1,000. Order numbers. Count in 50s.	Roman numerals to 100. Round to the nearest 10. Round to the nearest 100. Count in 1,000s. 1,000s, 100s, 10s and 1s. Partitioning. Number line to 10,000. 1,000 more or less. Compare numbers. Order numbers. Round to the nearest 1,000. Count in 25s. Negative numbers.	Number to 10,000. Roman numerals to 1,000. Round to the nearest 10, 100 and 1000. Number to 100,000. Compare and order numbers to 100,000. Round numbers within 100,000. Numbers to a million. Counting in 10s, 100s, 1,000s, 10,000s and 100,000s. Compare and order numbers to a million. Round numbers to a million. Negative numbers.	Numbers to ten million. Compare an order any number. Round any numbers. Negative numbers.

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declarative and procedur	ral knowledge.	·	area ressens mereasing enem prosiem s				
Addition and	Solve real-life maths problems	Represent numbers to 50. One more one less. Compare objects within 50. Compare numbers within 50. Order numbers within 50. Count in 2s. Count in 5s.  Part whole model. Addition symbol.	Fact families Addition and subtraction bonds to 20.	Add and subtract multiples of 100.	Add and subtract 1s, 10s, 100s and 1000s.	Add whole numbers with more than 4 digits (column method).	Add and subtract whole numbers.
Subtraction	with numbers up to 5. Know the total of a larger set by subitising the groups within it and immediately combining them to find the total (conceptual subitising). Demonstrate an understanding of the composition of numbers to 5. Demonstrate an understanding of the composition of numbers to 10. Automatically recall number bonds to 5. Automatically	Fact families Addition facts. Find number bonds for numbers within 10. Systematic methods for number bonds within 10. Number bonds to 10. Compare number bonds. Addition: Adding together. Addition: Adding more. Finding a part. Subtraction: Taking away, how many left? Crossing out. Subtraction: Taking away, how many left? Introducing the subtraction symbol. Subtraction: Finding a part, breaking apart. Fact families The 8 facts. Subtraction: Counting back. Subtraction: Finding the difference. Comparing addition and subtraction statements a + b > c. Comparing addition and subtraction statements a + b > c + d. Add by counting on. Find and make number bonds. Add by making 10. Subtraction - Not crossing 10. Subtraction - Crossing 10 (1). Subtraction - Crossing 10 (2). Related Facts.	Check calculations. Compare number sentences. Related facts. Bonds to 100 (tens). Add and subtract 1s. 10 more and 10 less. Add and subtract 10s. Add a 2 digit and 1 digit number crossing ten. Subtract a 1 digit number from a 2 digit number crossing 10. Add two 2 digit numbers not crossing ten add ones and add tens. Add two 2 digit numbers crossing ten add ones and add tens. Subtract a 2 digit number from a 2 digit number not crossing ten. Subtract a 2 digit number from a 2 digit number crossing ten subtract ones and tens. Bonds to 100 (tens and ones). Add three 1 digit numbers.	Add and subtract 3 digit numbers and ones not crossing 10. Add 3 digit and 1 digit numbers crossing 10. Subtract a 1 digit number from a 3 digit number crossing 10. Add and subtract 3 digit numbers and tens not crossing 100. Add a 3 digit number and tens crossing 100. Add and subtract 100s. Spot the pattern making it explicit. Add and subtract a 2 digit and 3 digit number not crossing 10 or 100. Add a 2 digit and 3 digit number crossing 10 or 100. Subtract 2 digit number from a 3 digit number cross the 10 or 100. Add two 3 digit numbers not crossing 10 or 100. Add two 3 digit numbers crossing 10 or 100. Subtract a 3 digit number from a 3 digit number not exchange. Subtract a 3 digit number from a 3 digit number not exchange. Subtract a 3 digit number from a 3 digit number exchange. Exchange answers to calculations. Check.	Add two 4 digit numbers no exchange. Add two 4 digit numbers one exchange. Add two 4 digit numbers more than one exchange. Subtract two 4 digit numbers no exchange. Subtract two 4 digit numbers one exchange. Subtract two 4 digit numbers more than one exchange. Efficient subtraction. Estimate answers. Checking strategies.	Subtract whole numbers with more than 4 digits (column method). Round to estimate and approximate. Inverse operations (addition and subtraction). Multi step addition and subtraction problems.	Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.  Use their knowledge of the order of operations to carry out calculations involving the four operations.  Solve problems involving addition, subtraction, multiplication and division.  Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.

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A standard lesson will include opportunities for retrieval for previous skills (retrieval). Then we move into fluency of the lesson and then children are given an opportunity to problem and reason. Each unit is begun with a practical lesson to ensure that the children have a deep understanding of the concept. We then spend several lessons increasing their problem solving and reasoning. At the end unit we have a purely problem solving and reasoning lesson where children are able to showcase their

declarative and procedural knowledge.

declarative and procedural knowledge						
	Compare Number					
	Sentences.					
Multiplication and division	Count in 10s.  Make equal groups.  Add equal groups.  Make arrays.  Make doubles.  Make equal groups -  grouping.  Make equal groups -  sharing.	Recognise equal groups. Make equal groups. Add equal groups. Multiplication sentences using the x symbol. Multiplication sentences from pictures. Use arrays. 2 times-table. 5 times-table. 10 times-table. Make equal groups sharing. Make equal groups grouping. Divide by 2. Odd and even numbers. Divide by 5. Divide by 10.	Multiplication equal groups. Multiplying by 3. Dividing by 3. The 3 times table. Multiplying by 4. Dividing by 4. The 4 times table. Multiplying by 8. Dividing by 8. Dividing by 8. The 8 times table. Comparing statements. Related calculations. Multiply 2 digits by 1 digit (1). Multiply 2 digits by 1 digit (2). Divide 2 digits by 1 digit (2). Divide 2 digits by 1 digit (2). Divide 2 digits by 1 digit (3). Scaling. How many ways?	Multiply by 10.  Multiply by 100.  Divide by 10.  Divide by 100.  Multiply by 1 and 0.  Divide by 1.  Multiply and divide by 6.  6 times table and division facts.  Multiply and divide by 9.  9 times table and division facts.  Multiply and divide by 7.  7 times table and division facts.  11 and 12 times table.  Multiply 3 numbers.  Factor pairs.  Efficient multiplication.  Written methods.  Multiply 2 digits by 1 digit.  Multiply 3 digits by 1 digit.  Divide 2 digits by 1 digit (1).  Divide 2 digits by 1 digit (2).	Multiples. Factors. Common factors. Prime numbers. Square numbers. Cube numbers. Multiplying by 10, 100 and 1000. Dividing by 10, 100 and 1000. Multiples of 10, 100 and 1000. Multiply 4 digits by 1 digit. Multiply 2 digits (area model). Multiply 2 digits by 2 digits. Multiply 3 digits by 2 digits. Multiply 4 digits by 2 digits. Divide 4 digits by 1 digit. Divide with remainders.	Multiply up to 4 digit by 1 digit number. Short division. Division using factors. Long division (1). Long division (2). Long division (3). Long division (4). Common factors. Common multiples. Primes. Squares and cubes. Order of operations. Mental calculations and estimation. Use their knowledge of the order of operations to carry out calculations involving the four operations. Solve problems involving addition, subtraction, multiplication and division. Use estimation to check answers to calculations and
Fractions	Halving shapes or objects. Halving a quantity. Find a quarter of a shape or object. Find a quarter of a quantity.	Make equal parts. Recognise half. Find half. Recognise quarter. Find a quarter. Recognise a third. Find a third. Unit fractions. NonOunit fractions. Equivalence of ½ and ²/4. Find three quarters. Count in fractions.	Unit and non unit fractions. Making the whole. Tenths. Count in tenths. Tenths as decimals. Fractions of a number line. Fractions of a set of objects (1). Fractions of a set of objects (2). Fractions of a set of objects (3). Equivalent fractions (1), Equivalent fractions (2). Equivalent fractions (3). Compare fractions. Order fractions. Add fractions. Subtract fractions.	What is a fraction? Equivalent fractions (1) Equivalent fractions (2). Fractions greater than 1. Count in fractions. Add 2 or more fractions. Subtract 2 fractions. Subtract from whole amounts. Calculate fractions of a quantity. Problem solving calculate quantities.	Equivalent fractions. Improper fractions to mixed numbers. Mixed numbers to improper fractions. Number sequences. Compare and order fractions less than 1. Compare and order fractions greater than 1. Add and subtract fractions. Add fractions within 1. Add 3 or more fractions. Add fractions. Add mixed numbers. Subtract fractions. Subtract mixed numbers. Subtract breaking the whole. Subtract 2 mixed numbers. Multiply unit fractions by an integer.	determine in the context of a problem, an appropriate degree of accuracy.  Reasoning from known facts.  Simplify fractions. Fractions on a number line. Compare & order (denominator). Compare & order (numerator). Add & subtract fractions (1). Add & subtract fractions (2). Adding fractions. Subtracting fractions. Mixed addition and subtraction. Multiply fractions by integers. Multiply fractions by integers. Divide fractions by integers (1). Divide fractions by integers (2). Four rules with fractions. Fraction of an amount. Finding the whole.

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declarative and proced	ural knowledge.						
Ni. wo b a m					Recognise tenths and	Multiply non unit fractions by an integer. Multiply mixed numbers by integers. Fraction of an amount. Using fractions as operators. Adding decimals within 1.	Three decimal places.
Number- decimals					hundredths. Tenths as decimals. Tenths on a place value grid. Tenths on a number line. Divide 1 digit by 10. Divide 2 digits by 10. Hundredths. Hundredths as decimals. Hundredths on a place value grid. Divide 1 or 2 digits by 100. Make a whole. Write decimals. Compare decimals. Order decimals. Round decimals. Halves and quarters.	Subtracting decimals within 1. Complements to 1. Adding decimals crossing the whole. Adding decimals with the same number of decimal places. Subtracting decimals with the same number of decimal places. Adding decimals with a different number of decimal places. Subtracting decimals with a different number of decimal places. Subtracting decimals with a different number of decimal places. Adding and subtracting whole and decimals. Decimal sequences. Multiplying decimals by 10, 100 and 1000. Dividing decimals by 10, 100 and 1,000.	Multiply by 10, 100 and 1,000. Divide by 10, 100 and 1,000. Multiply decimals by integers. Divide decimals by integers. Division to solve problems. Decimals as fractions. Fractions to decimals (1). Fractions to decimals (2).
Number – decimals and						Decimals up to 2 d.p. Decimals as fractions (1). Decimals as fractions (2).	Fractions to percentages. Equivalent FDP. Percentage of an amount (1).
percentages						Understand thousandths. Thousands as decimals. Rounding decimals. Order and compare decimals. Understand percentages. Percentages as fractions and decimals. Equivalent F.D.P.	Percentage of an amount (2). Percentages missing values. Percentage increase and decrease. Order FDP.
Geometry-	Can talk about	Recognise and name 3D	Recognise 2D and 3D shapes.	Turns and angles.	Identify angles.	Measuring angles in degrees.	Measure with a protractor.
shape	some common 2D shapes using informal and mathematical language. Can talk about some common 3D shapes using informal and mathematical language. Can select shapes appropriately for tasks.	shapes. Sort 3D shapes. Recognise and name 2D shapes. Sort 2D shapes. Patterns with 3D and 2D shapes.	Count sides on 2D shapes. Count vertices on 2D shapes. Draw 2D shapes. Lines of symmetry. Sort 2D shapes. Make patterns with 2D shapes. Count faces on 3D shapes. Count edges on 3D shapes. Count vertices on 3D shapes. Sort 3D shapes. Make patterns with 3D shapes.	Right angles in shapes. Compare angles. Draw accurately. Horizontal and vertical. Parallel and perpendicular. Recognise and describe 2D shapes. Recognise and describe 3D shapes. Make 3D shapes.	Compare and order angles. Triangles. Quadrilaterals. Lines of symmetry. Complete a symmetric figure.	Measuring with a protractor (1). Measuring with a protractor (2). Drawing lines and angles accurately. Calculating angles on a straight line. Calculating angles around a point. Calculating lengths and angles in shapes. Regular and irregular polygons. Reasoning about 3D shapes.	Introduce angles. Calculate angles. Vertically opposite angles. Angles in a triangle. Angles in a triangle special cases. Angles in a triangle missing angles. Angles in special quadrilaterals. Angles in regular polygons. Draw shapes accurately. Nets of 3D shapes.

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declarative and procedu							
	Combine shapes to						
	make new ones.						
	Understand that						
	shapes can be						
	decomposed into						
	smaller ones						
	within them.						
	wunin them.						
	- 1 1	- "	- "		- 11		
Geometry –	Explore shapes and	Describe turns.	Describing movement.		Describe position.	Position in the first quadrant.	Coordinates in the first
	spatial awareness	Describe Position (1).	Describing turns.		Draw on a grid.	Reflection.	quadrant.
position and	by rotating and	Describe Position (2).	Describing movement and turns.		Move on a grid.	Reflection	Coordinate in four quadrants.
	manipulating		Making patterns with shapes.		Describe a movement on a	With coordinates.	Translations.
direction	shapes.				grid.	Translation.	Reflections.
	Understand				l i	Translation with coordinates.	1
	positional						
	language.						
	Use positional						
	language.						
	Describe and						
	discuss a route.						
Measurement	Make direct	Compare lengths and	Measure length (cm).	Measure length.			
Wicasarcinent	comparisons	heights.	Measure length (m).	Equivalent lengths m & cm.			
-length and	between objects	Measure length (1).	Compare lengths.	Equivalent lengths mm &			
icingtii aira	relating to size.	Measure length (2).	Order lengths.	Compare lengths.			
height			Four operations with lengths.	Add lengths.			
	Begin to use		· · · · ·   · · · · · · · · · · · · ·	Subtraction lengths.			
	units to compare			Measure perimeter. calculate			
	size.			perimeter.			
	Make direct			регипесет.			
	comparisons						
	1 · · · · · · ·						
	between objects						
	relating to						
	length.						
	Begin to use						
	units to compare						
	length.						
	Make direct						
	comparisons						
	between objects						
	relating to						
	weight.						
	Begin to use						
	_						
	units to compare						
	weight.						
	Make direct						
	comparisons						
	between objects						
	relating to						
	capacity.						

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declarative and procedu							
	Begin to use						
	units to compare						
	capacity.						
	Can describe a						
	sequence of						
	events.				Kilometres.	   Measure perimeter.	
Measurement-					Perimeter on a grid.	Calculate perimeter.	
length and					Perimeter of a rectangle.	Area of rectangles.	
_					Perimeter of rectilinear shapes.	Area of compound shapes.	
perimeter						Area of irregular shapes.	
Measurement					What is area? Counting squares		
- area					Making shapes.		
- al Ca					Comparing area.		
Measurement-							Shapes same area. Area and perimeter.
perimeter,							Area of a triangle (1).
							Area of a triangle (2).
area, volume							Area of a triangle (3). Area of a parallelogram.
							Volume counting cubes.
							Volume of a cuboid.
Measurement		Introduce weight and mass.				What is volume? Compare volume.	
– weight and		Measure mass.				Estimate volume.	
		Compare mass.				Estimate capacity.	
volume		Introduce capacity.					
		Measure capacity. Compare capacity.					
Measurement			Compare mass. Measure mass in grams.	Measure mass (1). Measure mass (2).			
– mass,			Measure mass in kilograms.	Compare mass.			
capacity,			Compare capacity. Millilitres.	Add and subtract mass.  Measure capacity (1).			
			Litres.	Measure capacity (2).			
temperature			Temperature.	Compare capacity. Add and subtract capacity.			
Measurement-						Kilograms and kilometres. Milligrams and millilitres.	Metric measures. Convert metric measures.
converting						Metric units.	Calculate with metric
units						Imperial units. Converting units of time.	measures. Miles and kilometres.
units						Timetables.	Imperial measures.
Measurement-		Recognising coins. Recognising notes.	Count money -pence. Count money -pounds (notes and	Pounds and pence. Converting pounds and pence.	Pounds and pence. Ordering amounts of money.		
money		Counting in coins.	coins).	Adding money.	Using rounding to estimate		
			Count money -notes and coins.	Subtracting money.	money.		
			Select money.  Make the same amount.	Giving change.	Four operations.		
			Compare money.				

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Measurement - time	Before and after. Dates. Time to the hour. Time to the half hour. Writing time. Comparing time.	Find the total. Find the difference. Find change. Two-step problems. O'clock and half past. Quarter past and quarter to. Telling time to 5 minutes. Minutes in an hour, hours in a day. Find durations of time. Compare durations of time.	Months and years. Hours in a day. Telling the time to 5 minutes. Telling the time to the minute. AM and PM. 24 hour clock. Finding the duration. Comparing the duration. Start and end times. Measuring time in seconds.	Hours, minutes and seconds. Years, months, weeks and days. Analogue to digital 12 hour. Analogue to digital 24 hour.		
Statistics		Make tally charts. Draw pictograms (1 1). Interpret pictograms (2, 5 and 10). Interpret pictograms (2, 5 and 10). Interpret pictograms (2, 5 and 10). Block diagrams.	Pictograms. Bar charts. Tables. Interpret and present data using bar charts, pictograms and tables. Solve one step and two step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	Interpret charts. Comparison, sum and difference. Introducing line graphs. Line graphs. Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Read and interpret line graphs. Draw line graphs. Use line graphs to solve problems. Read and interpret tables. Two way tables. Timetables. Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables including timetables.	Read and interpret line graphs. Draw line graphs to solve problems. Circles. Read and interpret pie charts. Pie charts with percentages. Draw pie charts. The mean.
Algebra						Find a rule one step. Find a rule two step. Use an algebraic rule. Substitution. Formulae. Word problems. Solve simple one step equations. Solve two step equations. Find pairs of values. Enumerate possibilities.
Ratio						Use ratio language. Ratio and fractions. Introducing the ratio symbol. Calculating ratio. Using scale factors. Calculating scale factors. Ratio and proportion problems.

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