MATHS

CURRICULUM: MATHS

St Joseph's
Catholic Primary School

Love God, Love Learning, Love One Another.

CURRICULUM NARRATIVE

Welcome to secondary school!

Y5/6 Cycle b

- Place Value
- Addition and Subtraction
- Multiplication and Division
- Fractions
- Decimals
- Fractions, Decimals and %
- Area, Perimeter and Volume
- Converting Units
- Shape
- Position and Direction
- Ratio
- Algebra
- Statistics

Y5/6 Cycle a

- Statistics
- Ratio
- Algebra
- Shape
- Position and Direction
- Area, Perimeter and Volume
- Converting Units
- Place Value
- Addition and Subtraction
- Multiplication and Division
- Fractions
- Decimals
- Fractions, Decimals and %

Y3/4 Cycle b

- Place Value
- Addition and Subtraction
- Multiplication and Division
- Fractions
- Decimals
- Area
- Length and Perimeter
- Mass and Capacity
- Time
- Money
- Shape
- Position and Direction
- Statistics

Y3/4 Cycle a

- Statistics
- Shape
- Position and Direction
- Area
- Length and Perimeter
- Mass and Capacity
- Time
- Money
- Place Value
- Addition and Subtraction
- Multiplication and Division
- Fractions
- Decimals

Y1/2 Cycle b

- Place Value (Within 20)
- Addition and Subtraction
- Place Value (Within 100)
- Addition and Subtraction (Within 100)
- Multiplication and Division
- Fractions
- Shape
- Position and Direction
- Length and Height
- Money
- Time
- Mass, Capacity and Temperature
- Statistics

Y1/2 Cycle a

- Statistics
- Length and Height
- Money
- Time
- Mass, Capacity and Temperature
- Shape
- Position and Direction
- Multiplication and Division
- Fractions
- Place Value (Within 20)
- Addition and Subtraction
- Place Value (Within 100)
- Addition and Subtraction (Within 100)

EYFS

- It's me 1,2,3
- 1,2,3,4,5
- Alive in 5
- Growing 6,7,8
- Building 9 and 10
- To 20 and Beyond
- How Many Now?
- Sharing and Grouping
- Make Connections
- Match, Sort and Compare
- Talk about Measure and Pattern.
- Mass and Capacity
- Length, Height and Time
- Circles and Triangles
- Shapes with 4 sides
- Explore 3D Shapes
- Manipulate, Compose and Decompose
- Visualise, Build and Map

Your Maths journey starts here!

Love God, Love Learning, Love One Another.

CURRICULUM NARRATIVE

Intent

At St. Joseph's, we have designed a broad, balanced and progressive Mathematics curriculum which enables all pupils to become confident, fluent and resilient mathematicians.

Our intent is to ensure that all pupils:

- Become fluent in the fundamentals of mathematics, developing secure conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- Reason mathematically, using correct mathematical language to develop arguments, justifications and proofs
- Solve problems by applying their mathematical knowledge to a wide range of contexts with increasing sophistication
- Understand how mathematics is used in the real world and future careers, recognising its relevance beyond the classroom

Mathematics is taught as an interconnected subject, where pupils move fluently between different representations and make rich connections across mathematical ideas. This supports the development of fluency, reasoning and problem solving, while building confidence, resilience and perseverance.

Implementation

At St. Joseph's, Mathematics is taught through daily lessons using a mastery approach. Mastery in mathematics means pupils develop a deep, secure and adaptable understanding of mathematical concepts, which they can apply confidently in a range of contexts.

Our approach to mastery is underpinned by the five big ideas:

- Representation and Structure
- Mathematical Thinking
- Fluency
- Variation
- Coherence

Teaching Approach and Curriculum Design

Mastering Number (EYFS and Key Stage 1) and White Rose Maths schemes are used as the basis for teaching. They provide a clear progression of skills across all areas of mathematics and support pupils in developing strong number sense, reasoning and problem solving skills.

Key features include:

- Small, carefully sequenced steps that build on prior learning
- Use of concrete, pictorial and abstract (CPA) representations
- Opportunities to make connections between concepts and contexts
- High expectations for all pupils, with appropriate support and challenge

Lessons typically include:

- Opportunities to develop arithmetic fluency, including number bonds, times tables and written calculations
- Retrieval and review of previous learning to strengthen long term memory
- Explicit teaching and revisiting of mathematical vocabulary
- Introduction of new concepts that encourage pupils to ask "why?" and "why not?"
- Opportunities to reason mathematically and explain thinking

Most pupils progress through lessons at the same pace, with differentiation provided through targeted support and challenge where needed.

Assessment and Intervention

Assessment in Mathematics is ongoing and purposeful:

- Formative assessment takes place daily within lessons to inform teaching
- End of term summative assessments provide an overview of progress and attainment
- Outcomes are used to inform future planning and targeted interventions
- Arithmetic and reasoning are assessed using GAPS tests three times per year

Mathematics and Careers

Explicit teaching of career links is embedded within Mathematics units.

Pupils are taught how mathematical skills are used in a wide range of real world contexts and careers, helping them understand the purpose of their learning. Careers explored may include:

- Engineers and architects
- Scientists and researchers
- Accountants and economists
- Computer programmers and data analysts
- Surveyors and statisticians

These links help pupils see mathematics as a valuable and transferable skill, raise aspirations and support preparation for future education and employment.

Impact

By the time pupils leave St. Joseph's, they will:

- Be happy, confident and resilient mathematicians
- Have secure understanding of key mathematical concepts
- Demonstrate fluency, reasoning and problem solving skills
- Use mathematical vocabulary accurately and confidently
- Understand how mathematics connects to real life situations and future careers

The impact of our Mathematics curriculum is measured through:

- Monitoring of pupil outcomes and progress
- Deep dives, including pupil voice, book scrutiny and lesson observations
- Assessment of arithmetic and reasoning skills
- Moderation and professional dialogue between staff
- Tracking progress year on year to ensure pupils remain on track from their starting points
- Ongoing review by the Mathematics lead to identify next steps and drive improvement

Pupils leave St. Joseph's well prepared for the next stage of their education, equipped with the knowledge, skills and confidence to succeed in mathematics and beyond.

PROGRESSION OF SKILLS

NUMBER AND PLACE VALUE			
	COUNTING	**COMPARING NUMBERS**	**IDENTIFYING, REPRESENTING AND ESTIMATING NUMBERS**
Nursery	• Hear and join in saying some number names • Practice saying number names in order. • Join in counting forwards (1-5) • Join in counting backwards. (1-5)	• Collect objects to compare amounts • Make simple comparisons of amounts • Look for collections of larger or smaller amounts. • Compare and talk about larger or small amounts • Make large or small collections. • Make collections the same.	• To subitise small quantities without having to count 1:1. (1-5)
Reception	• Identify groups with the same number of things (1:1) counting • Say number words in sequence (initially to 5 and then 10 and then numbers crossing boundaries 19/20 and 29/30) • Tag each object with one number word. • Know the last number counted gives the total so far.	• Identify and use the language of more than and less than between two numbers. • Know the one more/ one less than relationship between counting numbers. • Know an amount does not change if things are rearranged (so long as none have been added or taken away) • To compare numbers and reason. (e.g.) have two boxes and decide which they would keep and why?	• To subitise small quantities without having to count 1:1. • Identify smaller numbers within a number (conceptual subitising- seeing groups and combining to make a total) • Numbers can be partitioned into different pairs of numbers. • A number can be partitioned into more than two numbers.
Y1	• Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens from 10 • Given a number, identify one more and one less	• Use the language of: equal to, more than, less than (fewer), most, least.	• Identify and represent numbers using objects and pictorial representations including the number line.
Y2	• Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward	• Compare and order numbers from 0 up to 100; use <, > and = signs	• Identify, represent and estimate numbers using different representations, including the number line
Y3	• Count from 0 in multiples of 4, 8, 50 and 100; • Find 10 or 100 more or less than a given number	• Compare and order numbers up to 1000	• Identify, represent and estimate numbers using a variety of representations
Y4	• Count backwards through zero to include negative numbers in tenths and hundredths • Count in multiples of 6, 7, 9, 25 and 1000 • Find 1000 more or less than a given number	• Order and compare numbers beyond 1000 • *Compare numbers with the same number of decimal places up to two decimal place.* (See Fractions)	• Identify, represent and estimate numbers using a variety of representations
Y5	• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • Count forwards or backwards in steps of powers of 10 for any given number up to 1000 000	• Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (See Reading and Writing Numbers)	
Y6	• Use negative numbers in context, and calculate intervals across zero	• Read, write, order and compare numbers up to 10 000000 and determine the value of each digit (See Reading and Writing Numbers)	

PROGRESSION OF SKILLS

NUMBER AND PLACE VALUE		
	READING AND WRITING NUMERS (INCLUDING ROMAN NUMERALS)	**UNDERSTADNING PLACE VALUE**
Nursery	• Recognise, copy and point to numbers (1-5)	
Reception	• Match a number symbol with a number of things.	
Y1	• Read and write numbers from 1 to 20 in numerals and words.	
Y2	• Read and write numbers to at least 100 in numerals and in words	• Recognise the place value of each digit in a two-digit number (tens, ones)
Y3	• Read and write numbers up to 1000 in numerals and in words • *Tell and write the time from an analogue clock, including using Roman numerals from to XII, and 12-hour and 24- hour clocks* (See Measurement)	• Recognise the place value of each digit in a three- digit number (hundreds, tens, ones)
Y4	• Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	• Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • 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 units, tenths and hundredths (See Fractions)
Y5	• Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (See Comparing Numbers) • Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	• Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (See Reading and Writing Numbers) • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (See Fractions)
Y6	• Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (See Understanding Place Value)	• Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (See Reading and Writing Numbers) • Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal place (See Fractions)

NUMBER AND PLACE VALUE		
	ROUNDING	**PROBLEM SOLVING**
Nursery		
Reception		
Y1		
Y2		• Use place value and number facts to solve problems including previous years learning
Y3		• Solve number problems and practical problems involving these ideas including previous years learning
Y4	• Round any number to the nearest 10, 100 or 1 000 • Round decimals with one decimal place to the nearest whole number (See Fractions)	• Solve number and practical problems that involve all of the above and with increasingly large positive numbers including previous years learning
Y5	• Round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000 • Round decimals with two decimal places to the nearest whole number and to one decimal place (See Fractions)	• Solve problems that involve all of the above including previous years learning
Y6	• Round any whole number to a required degree of accuracy up to 2 decimal places. • Solve problems which require answers to be rounded to specified degrees of accuracy (See Fractions)	• Solve problems that involve all of the above including previous years learning

PROGRESSION OF SKILLS

ADDITION AND SUBTRACTION		
	NUMBER BONDS	**MENTAL CALCULATIONS**
Nursery		
Reception	• Know which pairs make a given number	
Y1	• Represent and use number bonds and related subtraction facts within 20	• Add and subtract one- digit and two-digit numbers to 20, including zero (This helps to establish addition and subtraction as related operations) • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods)
Y2	• Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 .	• Add and subtract numbers first using concrete objects, then pictorial representations, and mentally, including: • a two-digit number and ones • a two-digit number and tens • two two-digit numbers • adding three one-digit numbers • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.
Y3		• Add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. (Consolidation from Year 2)
Y4		• Add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and ten * a three-digit number and hundreds (Consolidation from Year 3)
Y5		• Add and subtract numbers mentally with increasingly large numbers
Y6		• Perform mental calculations, including with mixed operations and large numbers. • Use their knowledge of the order of operations to carry out calculations involving the four operations.

PROGRESSION OF SKILLS

ADDITION AND SUBTRACTION			
	WRITTEN METHODS	**INVERSE OPERATION, ESTIMATING AND CHECKING ANSWERS**	**PROBLEM SOLVING**
Nursery			
Reception		• Inverse operation- partition a number of things into groups and recognise the groups can be recombined to make a total.	
Y1	• Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)		• Solve one-step problems that involve addition and subtraction, first using concrete objects and then pictorial representations, and missing number problems such as 7 = * - 9

Y2	• Record addition and subtraction calculations as a number sentence. 2 + 4 = 6	• Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	• solve problems with addition and subtraction:
			  • first using concrete objects and then pictorial representations, including those involving numbers, quantities and measures
			  • applying their increasing knowledge of mental and written methods
			• solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (See Measurement)

Y3	• Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	• Estimate the answer to a calculation and use inverse operations to check answers	• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction including previous years learning.
Y4	• Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	• Estimate and use inverse operations to check answers to a calculation	• Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why including previous years learning.
Y5	• Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	• Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why including previous years learning.
Y6	• Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) (Consolidation from Year 5)	• Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why including previous years learning. • Solve problems involving addition, subtraction, multiplication and division

PROGRESSION OF SKILLS

MULTIPLICATION AND DIVISION			
	MULTIPLICATION AND DIVISION FACTS	**MENTAL CALCULATIONS**	**WRITTEN CALCULATIONS**
Nursery			
Reception			
Y1	• Count in multiples of twos, fives and tens (See Number and Place Value)		
Y2	• *Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward* (See Number and Place Value) • *R*ecall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	• Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	• Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
Y3	• *Count from 0 in multiples of 4, 8, 50 and 100* (See Number and Place Value) • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	• Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one- digit numbers, using mental and progressing to formal written methods (See also Written Methods) • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot (Consolidation from Year 2)	• Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (See also Mental Methods)
Y4	• *Count in multiples of 6, 7, 9, 25 and 1 000* (See Number and Place Value) • Recall multiplication and division facts for multiplication tables up to 12 × 12	• Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • Recognise and use factor pairs and commutativity in mental calculations (See also Properties of numbers)	• Multiply two-digit and three-digit numbers by a one- digit number using formal written layout
Y5	• *Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000* (See Number and Place Value) • Recall multiplication and division facts for multiplication tables up to 12 × 12 (Consolidation from Year 4)	• Multiply and divide numbers mentally drawing upon known facts • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	• Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two digit numbers • Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context
Y6	• Recall multiplication and division facts for multiplication tables up to 12 × 12 (Consolidation from Year 4)	• Perform mental calculations, including with mixed operations and large numbers (Children to be taught when to use a mental or written method depending on the calculation) *associate a fraction with division and calculate decimal fraction equivalents (e.g 0.375) for a simple fraction (e.g. 3/8)* (See Fractions)	• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits by a two digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context *use written division methods in cases where the answer has up to two decimal places* (See Fractions (including decimals))

PROGRESSION OF SKILLS

MULTIPLICATION AND DIVISION	
	PROPERTIES OF NUMBERS: MULTIPLES, FACTORS, PRIMES, SQUARED AND CUBED NUMBERS
Nursery	
Reception	
Y1	
Y2	
Y3	
Y4	• Recognise and use factor pairs and commutativity in mental calculations (repeated)
Y5	• Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • Establish whether a number up to 100 is prime and recall prime numbers up to 19 • Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})
Y6	• Identify common factors, common multiples and prime numbers • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination (See Fractions) • Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3 (See Measures)

MULTIPLICATION AND DIVISION			
	ORDER OF OPERATION	**INVERSE OPERATION, ESTIMATING AND CHECKING ANSWERS**	**PROBLEM SOLVING**
Nursery			
Reception			
Y1			• Solve one-step problems involving multiplication and division, by calculating the answer first using concrete objects, then pictorial representations and arrays with the support of the teacher
Y2			• Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts and previous years learning.
Y3		• Estimate the answer to a calculation and use inverse operations to check answers (See Addition and Subtraction)	• Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which objects are connected to m objects and previous years learning.
Y4		• Estimate and use inverse operations to check answers to a calculation (See Addition and Subtraction)	• Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects and previous years learning.

PROGRESSION OF SKILLS

MULTIPLICATION AND DIVISION			
	ORDER OF OPERATION	**INVERSE OPERATION, ESTIMATING AND CHECKING ANSWERS**	**PROBLEM SOLVING**
Y5		• *Estimate and use inverse operations to check answers to a calculation* (See Addition and Subtraction) (Consolidation from Year 4)	• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates
Y6	• Use their knowledge of the order of operations to carry out calculations involving the four operations	• Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy	• Solve problems involving addition, subtraction, multiplication and division • *solve problems involving similar shapes where the scale factor is known or can be found* (See Ratio and Proportion)

PROGRESSION OF SKILLS

FRACTIONS, DECIMALS AND PERCENTAGES			
	COUNTING IN FRACTIONAL STEPS	**RECOGNISING FRACTIONS**	**COMPARING FRACTIONS**
Nursery		• Experience sharing • Know when something has been spit into two.	
Reception		• Know when something has been spit into two.	
Y1		• Recognise, find and name a half as one of two equal parts of an object, shape or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	
Y2	• Pupils should count in fractions up to 10, starting from any number and using the1/2 and 2/4 equivalence on the number line.	• Recognise, find, name and write fractions 1/3 ¼ 2/4 and ¾ of a set of objects, shape, quantity or length	
Y3	• Count up and down in tenths	• Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators (2,5,10,3,4,8) • Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10. • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators (2,5,10,3,4,8)	• Compare and order unit fractions, and fractions with the same denominators
Y4	• Count up and down in hundredths	• Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	• Compare and order unit fractions, and fractions with the same denominators (Consolidation from Year 3)
Y5		• Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (See Equivalence)	• Compare and order fractions whose denominators are all multiples of the same number
Y6			• Compare and order fractions, including fractions >1

FRACTIONS, DECIMALS AND PERCENTAGES			
	COMPARING DECIMALS	**ROUNDING INCLUDING DECIMALS**	**EQUIVALENCE (FRACTIONS, DECIMALS AND PERCENTAGES)**
Nursery			
Reception			
Y1			
Y2			• Write simple fractions e.g. ½ of 6 = 3 and recognise the equivalence of 2/4 and ½
Y3			• Recognise and show, using diagrams, equivalent fractions with small denominators

PROGRESSION OF SKILLS

FRACTIONS, DECIMALS AND PERCENTAGES *Continued…*			
	COMPARING DECIMALS	**ROUNDING INCLUDING DECIMALS**	**EQUIVALENCE (FRACTIONS, DECIMALS AND PERCENTAGES)**
Y4	• Compare numbers with the same number of decimal places up to two decimal places	• Round decimals with one decimal place to the nearest whole number	• Recognise and show, using diagrams, families of common equivalent fractions • Recognise and write decimal equivalents of any number of tenths or hundredths • Recognise and write decimal equivalents to ¼, ½ and ¾
Y5	• Read, write, order and compare numbers with up to three decimal places	• Round decimals with two decimal places to the nearest whole number and to one decimal place	• Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • Read and write decimal numbers as fractions (e.g. 0.71 = 7 1 / 100) • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100 as a decimal fraction
Y6	• Identify the value of each digit in numbers given to three decimal places	• Solve problems which require answers to be rounded to specified degrees of accuracy, up to 2 decimal places.	• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8) • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

FRACTIONS, DECIMALS AND PERCENTAGES		
	ADDITION AND SUBTRACTION OF FRACTIONS	**MULTIPLICATION AND DIVISION OF FRACTIONS**
Nursery		
Reception		
Y1		
Y2		
Y3	• Add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7 = 6/7)	
Y4	• Add and subtract fractions with the same denominator	
Y5	• Add and subtract fractions with the same denominator and multiples of the same number • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 (e.g.) 2/5 = 4/5 = 6/5 = 1 1/5.	• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
Y6	• Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	• Multiply simple pairs of proper fractions, writing the answer in its simplest form ¼ x ½ = 1/8 • Multiply one-digit numbers with up to two decimal places by whole numbers • Divide proper fractions by whole numbers 1/3 ÷ 2 = 1/6

PROGRESSION OF SKILLS

FRACTIONS, DECIMALS AND PERCENTAGES		
	MULTIPLICATION AND DIVISION	**PROBLEM SOLVING**
Nursery		
Reception		
Y1		
Y2		
Y3		• Solve problems that involve addition and subtraction of fractions
Y4	• 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	• 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 • Solve simple measure and money problems involving fractions and decimals to two decimal places.
Y5		• Solve problems involving numbers up to three decimal places • Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5 and 4/5 and those with a denominator of a multiple of 10 or 25.
Y6	• Multiply one-digit numbers with up to two decimal places by whole numbers • Multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places • Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places • Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^{3}/_{8}$) • Use written division methods in cases where the answer has up to two decimal places	

PROGRESSION OF SKILLS

POSITION AND DIRECTION		
	POSITION, DIRECTION AND MOVEMENT	**PATTERN**
Nursery	• Respond to simple language of position • Arrange blocks in a chosen position • Select shapes for a space • Talk and move in simple positions • Follow simple small world routes • Follow simple routes outside.	• Listen to repeats in songs or stories. • Start to join in with songs and repeats • Start to join in repeats from stories. • Clap along to songs • Make line patterns with their own sequence • Choose blocks to build roads and towers. • Have a sense of a daily routine • Say what happens next • Make arrangements in art. • Show an interest in patterns and shapes.
Reception	• Develop spatial vocabulary and use the language of position and Direction (e.g.) in, or, under, up, down, across • Develop spatial awareness and looking at objects/ shapes from different viewpoints. • Represent spatial relationships (e.g.) In front of, behind and on top.	• Continue and copy and AB pattern • Make their own AB pattern • Spot an error in an AB pattern. • Identify the unit of repeat • Continue and ABC pattern • Continue a pattern that end mid- unit • Make an ABB pattern and ABBC pattern • Spot an error in an ABB pattern • Symbolize the unit structure • Generalise structures to another context or mode • Make a pattern that repeats around a circle • Make a pattern around a border with a fixed number of shapes • Spot patterns in the environment
Y1	• Describe position, direction and movement, including half, quarter, three quarter and whole turns.	
Y2	• Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (Clockwise and anti clockwise)	• order and arrange combinations of mathematical objects in patterns and sequences.
Y3	• Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) (Consolidation from Year 2)	
Y4	• Describe positions on a 2-D grid as coordinates in the first quadrant • Describe movements between positions as translations of a given unit to the left/right and up/down • Plot specified points and draw sides to complete a given polygon	
Y5	• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	
Y6	• Describe positions on the full coordinate grid (all four quadrants) • Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	

PROGRESSION OF SKILLS

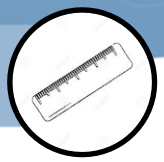
PROPERTIES OF SHAPES		
	DRAWING AND CONSTRUCTION	**COMPARING AND CLASSIFYING**
Nursery	• Explore and play with shapes. • Show interests in simple differences between shapes. • Put shapes and blocks into position • Select shapes for a reason. • Begin to explore and describe natural shapes and objects. • Find and collect objects for a purpose.	• Recognise when two objects are the same shape. • Sort shapes into simple categories.
Reception		• Identify similarities between shapes.
Y1		
Y2		• Compare and sort common 2-D and 3-D shapes and everyday objects
Y3	• Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them (Nets made only)	
Y4	• Complete a simple symmetric figure with respect to a specific line of symmetry	• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
Y5	• Draw given angles, and measure them in degrees (^{o})	• Use the properties of rectangles to deduce related facts and find missing lengths and angles • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles
Y6	• Draw 2-D shapes using given dimensions and angles • Recognise, describe and build simple 3D shapes, including making nets – draw and make (appears also in Identifying Shapes and Their Properties)	• Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons

PROPERTIES OF SHAPES	
IDENTIFYING SHAPES AND THEIR PROPERTIES	
Nursery	• Explore and describe shapes and objects.
Reception	• Develop an awareness of relationships between shapes (e.g.) spot shapes within shapes • Describe properties of shapes. • Show an awareness of properties of shapes (e.g.) Using cylinders for wheels as they can roll. • Shape awareness: developing shape awareness through construction.
Y1	• Recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].
Y2	• Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]
Y3	• Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line (Consolidation from Year 2) • Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces (Consolidation from Year 2) • Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] (Consolidation from Year 2)
Y4	• Identify lines of symmetry (vertical, horizontal, diagonal) in 2-D shapes presented in different orientations
Y5	• Identify 3-D shapes, including cubes and other cuboids, from 2-D representations
Y6	• Recognise, describe and build simple 3-D shapes, including making nets – draw and make (appears also in Drawing and constructing) • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

PROGRESSION OF SKILLS

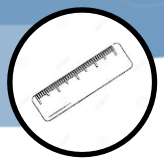
PROPERTIES OF SHAPES	
ANGLES	
Nursery	
Reception	
Y1	
Y2	
Y3	• Recognise angles as a property of shape or a description of a turn Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angles. • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines
Y4	• Recognise angles as a property of shape or a description of a turn (Consolidation from Year 3) • Identify acute and obtuse angles and compare and order angles up to two right angles by size
Y5	• Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • Identify: angles at a point and one whole turn (total 360^{o}) , angles at a point on a straight line and ½ a turn (total 180) and other multiples of 90^{o}
Y6	• Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles

PROGRESSION OF SKILLS



MEASUREMENT		
	COMPARING AND ESTIMATING	**MEASURING AND CALCULATING**
Nursery		
Reception	• Recognise attributes (e.g.) a stick in long, an adult is tall. • Compare amounts of continuous quantities.(e.g.) find something that is longer/ shorter than a given reference point. • Show an awareness of comparisons in estimating and predicting • Compare indirectly • Use units to compare items.	• Recognise the relationship between the size and number of units.
Y1	• Compare, describe and solve practical problems for: **lengths and heights** long/short, longer/shorter, tall/short, double/half] **mass/weight** heavy/light, heavier than, lighter than **capacity and volume** full/empty, more than, less than, half, half full, quarter **time** quicker, slower, earlier, later • Sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	• Measure and begin to record the following: lengths and heights, mass/weight, capacity and volume time (hours, minutes, seconds) • Recognise and know the value of different denominations of coins and notes
Y2	• Compare and order lengths, mass, volume/capacity and record the results using >, < and = • Compare and sequence intervals of time	• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres /ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels • Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value · find different combinations of coins that equal the same amounts of money · solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving chang
Y3	• Compare durations of events, for example to calculate the time taken by particular events or task • Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Telling the Time)	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • Measure the perimeter of simple 2-D shapes • Add and subtract amounts of money to give change, using both £ and p in practical contexts
Y4	• Estimate, compare and calculate different measures, including money in pounds and pence (also included in measuring)	• Estimate, compare and calculate different measures, including money in pounds and pence (See Comparing) • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • Add and subtract amounts of money to give change, using both £ and p in practical contexts (Consolidation from Year 3) • Find the area of rectilinear shapes by counting squares
Y5	• Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes (also included in measuring) • Estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water)	• Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. • Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes • Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) (copied from Multiplication and Division)
Y6	• Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm3) and cubic metres (m3), and extending to other units such as mm3 and km3 .	• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (See Converting) • Recognise that shapes with the same areas can have different perimeters and vice versa • Calculate the area of parallelograms and triangles • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres • (m3), and extending to other units e.g.mm3 and km3 • Recognise when it is possible to use formulae for area and volume of shapes

PROGRESSION OF SKILLS



MEASUREMENT		
	TELLING THE TIME	**CONVERTING**
Nursery		
Reception	• Use time to sequence events. • Experience specific time durations.	
Y1	• Tell the time to the hour and half past the hour and draw the hands on a face to show these times • Recognise and use language relating to dates, including days of the week, weeks, months and years	
Y2	• Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. • Know the number of minutes in an hour and the number of hours in a day. (appears also in Converting)	• Know the number of minutes in an hour and the number of hours in a day. (appears also in Telling the Time)
Y3	• Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clock • Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (See Comparing and Estimating)	• Know the number of seconds in a minute and the number of days in each month, year and leap year
Y4	• Estimate, compare and calculate different measures, including money in pounds and pence (also included in measuring)	• Convert between different units of measure (e.g. kilometre to metre; hour to minute. • Read, write and convert time between analogue and digital 12 and 24hour clocks (See Telling the Time) • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (See Telling the Time)
Y5	• Read, write and convert time between analogue and digital 12 and 24hour clocks (See Converting) (Consolidation from Year 3) • Solve problems involving converting between units of time	• Convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • Solve problems involving converting between units of time • Understand and use equivalences between metric units and common imperial units such as inches, pounds and pints
Y6		• Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (See Measuring and Calculating) • Convert between miles and kilometres.

PROGRESSION OF SKILLS

STATISTICS		
	INTERPRETING, CONSTRUCTING AND PRESENTING DATA	**PROBLEM SOLVING**
Nursery		
Reception		
Y1		
Y2	• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • Ask and answer questions about totalling and comparing categorical data	
Y3	• Interpret and present data using bar charts, pictograms and tables	• Solve one-step and two- step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.
Y4	• 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.
Y5	• Complete, read and interpret information in various tables and graphs, including timetables and line graphs.	• Solve comparison, sum and difference problems using information presented in a line graph
Y6	• Interpret and construct pie charts and line graphs and use these to solve problems	• Calculate and interpret the mean as an average

PROGRESSION OF SKILLS

ALGEBRA			
	EQUATIONS	**FORMULAE**	**SEQUENCES**
Nursery			
Reception			
Y1	• Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and **missing number problems** such as 7 = - 9 (See Addition and Subtraction) • Represent and use number bonds and related subtraction facts within 20 (See Addition and Subtraction)		• Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening (See Measurement)
Y2	• Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and **missing number** problems. (See Addition and Subtraction) • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (See Addition and Subtraction)		• Compare and sequence intervals of time (See Measurement) • Order and arrange combinations of mathematical objects in patterns (See Geometry: position and direction)
Y3	• Solve problems, including **missing number** problems, using number facts, place value, and more complex addition and subtraction. (copied from Addition and Subtraction) • Solve problems, including **missing number** problems, involving multiplication and division, including integer scaling (See Multiplication and Division)		
Y4		• Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit. (See measurement)	
Y5	• Use the properties of rectangles to deduce related facts and find **missing lengths and angles** (See Geometry: Properties of Shapes)		
Y6	• Express missing number problems algebraically • Find pairs of numbers that satisfy number sentences involving two unknowns • Enumerate all possibilities of combinations of two variables	• Use simple formulae • Recognise when it is possible to use **formulae** for area and volume of shapes (See Measurement)	• Generate and describe linear number sequences

CURRICULUM END POINTS

	Number	Number Patters	Addition and Subtraction	Fractions	Shape, Space and Measure	Patterns & Relationships
Nursery	•Recite numbers beyon d 5. •Say one number for each item in order (1:1) •Begin to recognise numerals to 5	•Understand the cardinal principle •Subitise up to 3 •Extend and create ABAB patterns •Compare quantities using language such as more, fewer, same.	•Begin to count small sets of objects •Combine two groups practically and notice how many altogether •Begin to talk about taking away in play contexts	•Experience sharing in play (e.g., "half each") •Begin to notice when something is split into two parts	•Compare objects by size, length, weight and capacity •Combine shapes to make new ones •Identify simple patterns in the environment	•Use language of same and different •Recognise simple patterns •Begin to predict what comes next in a familiar pattern
Reception	•Deep understanding of numbers to 10 •Subitise up to 5 •Recall number bonds to 5 and some to 10	•Verbally count beyond 20 •Compare quantities up to 10 •Explore patterns within numbers to 10	•Recall pairs that make 5 •Represent addition and subtraction with objects and images	•Explore halving and sharing in practical contexts •Recognise when a whole is split into two equal parts	•Select, rotate and manipulate shapes •Continue, copy and create repeating patterns •Compare length, weight and capacity.	•Continue simple patterns •Explore simple rules in play

	Number and Place Value	Number Facts	Addition and Subtraction	Multiplication and Division	Fractions	Geometry	Measure	Algebra
Y1	•Count within 100 forwards and backwards •Compare nu mbers using <, > and =	•Develop fluency in addition and subtraction facts within 10 •Count in multiples of 2, 5 and 10	•Compose an d partition numbers to 10 •Read, write and interpret add ition and subtraction equations	•Understand multiplication as repeated addition •Understand division as sharing and grouping	•Recognise, find and name 1/2 and 1/4 of objects, shapes and quantities	•Recognise common 2D and 3D shapes •Compose shapes to make new shapes	•Compare and describe length, mass, capacity and time •Sequence events and use language relating to dates	•Recognise and describe number patterns •Use simple rules to generate sequences •Represent unknowns with symbols

CURRICULUM END POINTS

	Number and Place Value	Number Facts	Addition and Subtraction	Multiplication and Division	Fractions	Geometry	Measure	Algebra
Y2	•Recognise place value in two-digit numbers •Identify previous and next multiples of 10	•Secure fluency in addition and subtraction facts within 10	•Add and subtract across 10 •Recognise subtraction as difference •Add and subtract within 100 using known facts.	•Represent repeated addition with multiplication equations •Recall and use facts for 2, 5 and 10	•Recognise, find and name fractions including 1/3, 1/4, 2/4, 3/4 •Find fractions of quantities •Reason about fractions on a number line	•Describe properties of 2D and 3D shapes •Compare shapes using reasoning	•Use standard units to measure length, mass, temperature and capacity •Recognise and use £ and p •Tell the time to the nearest 5 minutes	•Solve missing number problems. •Recognise relationships such as odd/even and doubles/halves •Explain simple rules
Y3	•Understand relationships between tens and hundreds •Recognise place value in three-digit numbers •Reason about number lines and intervals	•Secure fluency in facts that bridge 10 •Recall multiplication and division facts for 2, 4, 5, 8 and 10	•Calculate complements to 100 •Add and subtract three-digit numbers using columnar methods	•Apply known facts to solve contextual problems	•Interpret and write proper fractions •Find unit fractions of quantities •Add and subtract fractions with the same denominator	•Recognise right angles •Draw polygons and identify parallel/perpendicular sides	•Tell time using 12- and 24-hour clocks •Measure and compare using standard units	•Describe number patterns •Use function machines •Represent problems with symbols
Y4	•Understand relationships between hundreds and thousands •Recognise place value in four-digit numbers. •Round to the nearest 100 and 1,000	•Recall multiplication and division facts to 12 × 12 •Solve division problems with remainders	•Add and subtract four-digit numbers using written methods.	•Multiply and divide by 10 and 100 •Apply commutativity and distributivity	•Convert between mixed numbers and improper fractions •Add and subtract fractions with the same denominator •Recognise decimal equivalents.	•Translate shapes •Identify and complete symmetrical figures •Draw polygons using coordinates	•Convert between units of measure •Calculate perimeter	•Generate sequences from rules •Use letters to represent unknowns •Solve missing-number problems.

CURRICULUM END POINTS

	Number and Place Value	Number Facts	Addition and Subtraction	Multiplication and Division	Fractions	Geometry	Measure	Algebra
Y5	•Understand relationships between tenths, hundredths and wholes •Recognise place value in numbers with up to 2 decimal places •Round decimals to the nearest whole number and tenth	•Secure fluency in multiplication and division facts	•Add and subtract numbers with more than 4 digits	•Multiply and divide by 10 and 100 •Find factors, multiples and common factors •Multiply up to 4-digit numbers by 1-digit numbers •Divide up to 4-digit numbers by 1-digit numbers	•Find non-unit fractions of quantities •Compare and order fractions, decimals and percentages •Recall decimal equivalents for common fractions	•Compare and measure angles •Calculate area of rectangles	•Convert between units of time •Estimate volume and capacity	•Recognise and describe linear sequences •Use expressions to represent rules •Substitute values into expressions •Solve problems involving simple formulae
Y6	•Understand relationships between powers of 10 •Recognise place value up to 10 million •Round numbers appropriately in context	•Secure fluency in multiplication and division facts.	•Understand additive relationships •Use one calculation to derive another	•Solve ratio problems •Solve problems with two unknowns •Understand multiplicative relationships	•Simplify fractions •Express fractions in a common denominator •Compare fractions •Add and subtract fractions, including mixed numbers •X and / fractions by whole numbers •Convert between fractions, decimals and %	•Draw, compose and decompose shapes using given properties •Solve problems involving dimensions, angles and area	•Convert between a wide range of units •Calculate area of triangles and a parallelogram •Calculate volume of cuboids	•Use and interpret function machines •Form expressions and equations •Substitute values into expressions and formulae •Solve one-step and two-step equations •Generate pairs of values that satisfy equations •Apply algebra in context

CAREERS AND INFLUENTIAL PEOPLE

My Path Careers Videos

KS1 children learn about a specific career (Job spotlight)

KS2 children about a range of careers (Maths, Why Bother?)

Maths							
		Autumn 1 *Addition and Subtraction*	**Autumn 2** *Place Value*	**Spring 1** *Multiplication and Division*	**Spring 2** *Statistics*	**Summer 1** *Time*	**Summer 2** *Position and Direction*
Y1/2 (Cycle a)	**Career**	Fashion Designer 	Engineer 	Pharmacist 	Doctor 	Flight Attendant 	Games Developer 

Maths							
		Autumn 1 *Place Value*	**Autumn 2** *Area*	**Spring 1** *Length and Perimeter*	**Spring 2** *Fractions*	**Summer 1** *Money*	**Summer 2** *Shape*
Y3/4 (Cycle a)	**Career**	Data Analyst Supermarket Assistant Construction Estimator 	Chef Mechanic Event Planner 	Electricians Plumber Landscaper 	Interior Designer Costume Designer Carpenter 	Banker Estate Agents Business Owner 	Fashion Designer Graphic Designer Artist 

Maths							
		Autumn 1 *Place Value*	**Autumn 2** *Multiplication and Division*	**Spring 1** *Area, Perimeter and Volume*	**Spring 2** *Decimals*	**Summer 1** *Algebra*	**Summer 2** *Converting Units of Measure*
Y5/6 (Cycle a)	**Career**	Sales Representative Calligrapher Forensic Accountant 	Hotel Operations Director Telecommunications Engineer Transport Planner 	Golf Course Designer Cemetery Planner Film Set Designer 	Pharmacist Civil Engineer Sports Scientist 	Cryptographer Robotics Engineer Telecommunication Assistant 	Explosive Expert Aviation Accident Investigator Forensic Scientist 

CAREERS AND INFLUENTIAL PEOPLE

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KS1 children learn about a specific career (Job spotlight)

KS2 children about a range of careers (Maths, Why Bother?)

Maths							
		Autumn 1 *Place Value*	**Autumn 2** *Shape*	**Spring 1** *Addition and Subtraction*	**Spring 2** *Length and Height*	**Summer 1** *Money*	**Summer 2** *Mass and Capacity*
Y1/2 (Cycle b)	**Career**	Teacher 	Artist 	Plumber 	Construction Worker 	Farmer 	Marine Biologist 

Maths							
		Autumn 1 *Addition and Subtraction*	**Autumn 2** *Multiplication and Division*	**Spring 1** *Fractions*	**Spring 2** *Mass and Capacity*	**Summer 1** *Time*	**Summer 2** *Statistics*
Y3/4 (Cycle b)	**Career**	Accountant Supermarket assistant Builder 	Architect Pharmacist Baker 	Interior Designer Costume Designer Carpenter 	Waste Management Specialist Chemical Engineer Environmental Scientist 	Pilot Teachers Doctors 	Sports Analyst Environmental scientist Market research analysist 

Maths							
		Autumn 1 *Addition and Subtraction*	**Autumn 2** *Fractions*	**Spring 1** *Decimals*	**Spring 2** *Fractions, Decimals and percentages*	**Summer 1** *Shape*	**Summer 2** *Statistics*
Y5/6 (Cycle b)	**Career**	Event Planner Financial Advisor Sports Statistician 	Meteorologist Animator Vet 	Electrician Chemist Software Developer 	Real Estate Appraiser Demographer Costume Designer 	Special Effects Designer Architectural Model Maker Cake decorator 	Behavioural Economist Music Streaming Data Analyst Election Pollster 

BRITISH VALUES, TRUST VIRTUES AND CATHOLIC SOCIAL TEACHINGS

Maths							
		Autumn 1 *Addition and Subtraction*	**Autumn 2** *Place Value*	**Spring 1** *Multiplication and Division*	**Spring 2** *Statistics*	**Summer 1** *Time*	**Summer 2** *Position and Direction*
Y1/2 (Cycle a)	**British Values**	Individual Liberty	Individual Liberty	Mutual Respect and Tolerance	Mutual Respect and Tolerance	Mutual Respect and Tolerance	Individual Liberty
	Trust Virtues and Catholic Social Teachings	Resilience	Common Good	Compassion	Human Dignity	Self- Belief	Confidence

Maths							
		Autumn 1 *Place Value*	**Autumn 2** *Area*	**Spring 1** *Length and Perimeter*	**Spring 2** *Fractions*	**Summer 1** *Money*	**Summer 2** *Shape*
Y3/4 (Cycle a)	**British Values**	Mutual Respect and Tolerance	Individual Liberty	Individual Liberty	Individual Liberty	Individual Liberty	Individual Liberty
	Trust Virtues and Catholic Social Teachings	Confidence	Self- Belief	Self- Belief	Confidence	Honesty	Resilience

Maths							
		Autumn 1 *Place Value*	**Autumn 2** *Multiplication and Division*	**Spring 1** *Area, Perimeter and Volume*	**Spring 2** *Decimals*	**Summer 1** *Algebra*	**Summer 2** *Converting Units of Measure*
Y5/6 (Cycle a)	**British Values**	Individual Liberty	Mutual Respect and Tolerance	Individual Liberty	Mutual Respect and Tolerance	Individual Liberty	Individual Liberty
	Trust Virtues and Catholic Social Teachings	Responsibility	Sel- Belief	Resilience	Common Good	Self- Belief	Resilience

BRITISH VALUES, TRUST VIRTUES AND CATHOLIC SOCIAL TEACHINGS

Maths							
		Autumn 1 *Place Value*	**Autumn 2** *Shape*	**Spring 1** *Addition and Subtraction*	**Spring 2** *Length and Height*	**Summer 1** *Money*	**Summer 2** *Mass and Capacity*
Y1/2 (Cycle b)	**British Values**	Mutual Respect and Tolerance	Individual Liberty	Individual Liberty	Individual Liberty	Mutual Respect and Tolerance	Individual Liberty
	Trust Virtues and Catholic Social Teachings	Honesty	Self- Belief	Confidence	Resilience	Stewardship	Confidence

Maths							
		Autumn 1 *Addition and Subtraction*	**Autumn 2** *Multiplication and Division*	**Spring 1** *Fractions*	**Spring 2** *Mass and Capacity*	**Summer 1** *Time*	**Summer 2** *Statistics*
Y3/4 (Cycle b)	**British Values**	Mutual Respect and Tolerance	Individual Liberty	Individual Liberty	Individual Liberty	Mutual Respect and Tolerance	Individual Liberty
	Trust Virtues and Catholic Social Teachings	Rights and Responsibilities	Self- Belief	Confidence	Self- Belief	Honesty	Resilience

Maths							
		Autumn 1 *Addition and Subtraction*	**Autumn 2** *Fractions*	**Spring 1** *Decimals*	**Spring 2** *Fractions, Decimals and percentages*	**Summer 1** *Shape*	**Summer 2** *Statistics*
Y5/6 (Cycle b)	**British Values**	Individual Liberty	Mutual Respect and Tolerance	Individual Liberty	Individual Liberty	Individual Liberty	Democracy
	Trust Virtues and Catholic Social Teachings	Responsibility	Common Good	Resilience	Self- Belief	Resilience	Common Good

Love God, Love Learning, Love One Another.

The maths curriculum has been designed to be delivered to the whole class. However, the tasks are adapted by class teachers to meet the needs of individual children. To ensure pupils with SEND achieve well, they should be exposed to the same learning as their peers; however, the way they evidence their learning through the tasks can be adapted.

Through scaffolding, tasks can be adapted to ensure all learners can access and evidence the same threshold concepts and learning objectives as their non-SEND counterparts. Scaffolding strategies can include vocabulary banks, sorting and matching cards or manipulatives. Reactive or proactive adaptations can make the maths curriculum accessible and achievable for all.

Other strategies of adaptation are outlined through the EEF's Five-a-Day principles, which include explicit instruction, metacognitive strategies, flexible grouping and the use of technology:

Scaffolding
'Scaffolding' is a metaphor for temporary support that is removed when it is no longer required. Initially, a teacher would provide enough support so that pupils can successfully complete tasks that they could not do independently. This requires effective assessment to gain a precise understanding of the pupil's current capabilities.
Examples: Support could be visual, verbal, or written. Writing frames, partially completed examples, knowledge organisers, sentence starters can all be useful. Reminders of what equipment is needed for each lesson and classroom routines can be useful. Scaffolding discussion of texts: promoting prediction, questioning, clarification and summarising.

Explicit Instruction
Explicit instruction refers to a range of teacher-led approaches, focused on teacher demonstration followed by guided practice and independent practice. Explicit instruction is not just "teaching by telling" or "transmission teaching" A popular approach to explicit instruction is Rosenshine's 'Principles of Instruction'.
Examples: Worked examples with the teacher modelling self-regulation and thought processes is helpful. A teacher might teach a pupil a strategy for summarising a paragraph by initially 'thinking aloud' while identifying the topic of the paragraph to model this process to the pupil. They would then give the pupil the opportunity to practise this skill. Using visual aids and concrete examples promotes discussion and links in learning.

Cognitive and Metacognitive Strategies
Cognitive strategies are skills like memorisation techniques or subject specific strategies like methods to solve problems in maths. Metacognitive strategies help pupils plan, monitor and evaluate their learning
Examples: Chunking the task will support pupils with SEND – this may be through provision of checklists, instructions on a whiteboard or providing one question at a time. This helps reduce distractions to avoid overloading working memory.
Prompt sheets that help pupils to evaluate their progress, with ideas for further support.

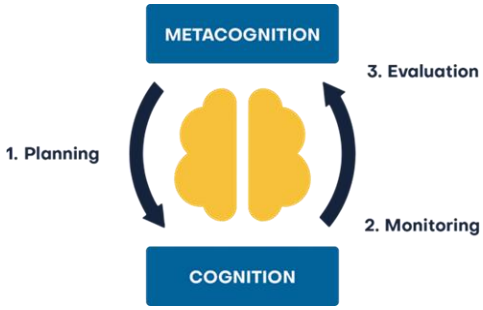
Flexible Grouping
Flexible grouping describes when pupils are allocated to smaller groups based on the individual needs that they currently share with other pupils. Such groups can be formed for an explicit purpose and disbanded when that purpose is met
Examples: Allocating temporary groups can allow teachers to set up opportunities for collaborative learning, for example to read and analyse source texts, complete graphic organisers, independently carry out a skill, remember a fact, or understand a concept. Pre-teaching key vocabulary, is a useful technique.

Use of Technology
Technology can assist teacher modelling. Technology, as a method to provide feedback to pupils and/ or parents can be effective, especially when the pupil can act on this feedback.
Examples: Use a visualizer to model worked examples. Technology applications, such as online quizzes can prove effective. Speech generating apps to enable note-taking and extended writing can be helpful.

ASSESSMENT

Assessment comprises two <u>linked</u> processes:

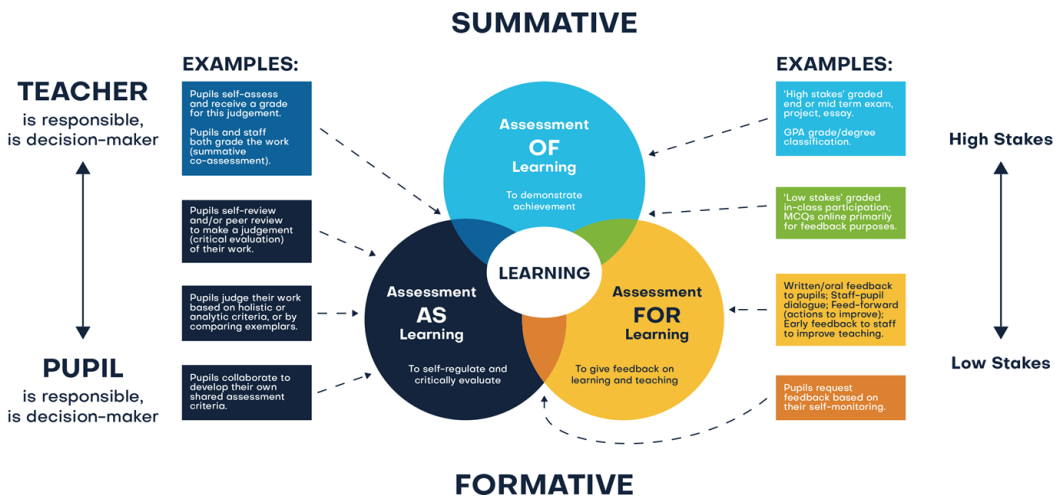
Formative Assessment: provides Assessment **<u>for</u>** Learning. Is a continuous process and an integral part of teaching and learning; informal observations, dialogue/effective use of questioning, consolidation activities, low stakes quizzing, routine marking; and pupil/peer assessment all contribute to the developing profile of progress. When pupils make changes and consider actions to their work, based on the activity, they are 'self-regulating' their work. Self-regulating activities can be termed Assessment **<u>as</u>** Learning. Self-regulated learners are aware of their strengths and weaknesses, and can motivate themselves to engage in, and improve, their learning. Pupils start by **planning** how to undertake a task, working on it while **monitoring** the strategy to check progress, then **evaluating** the overall success.



Metacognitive Regulation Cycle
(EEF Metacognition & Self regulation Guidance)

Summative Assessment: provides Assessment **<u>of</u>** Learning and is a judgement of attainment at key points throughout the year- using past knowledge to measure attainment and progress. Examples of this are standardised tests, tasks and end of term/annual assessments which include a sample of pupil's prior learning.

Assessment is a continuous process which is integral to teaching and learning and:
•Enables an informed judgement to be made about a pupil's understanding, skills, attitude to learning and successful acquisition of knowledge as they move through the curriculum.
•Incorporates a wide range of assessment techniques to be used in different contexts/purposes.
•Is accompanied by **clear assessment criteria** that enables effective marking and feedback, a reliable progress evaluation to be given and demonstrates clearly what a pupil must do to improve.
•Provides feedback recognising achievement, increasing pupil confidence/motivation.
•Supports learning by making clear to pupils: what they are trying to achieve; what they have achieved; what the learning gaps and misconceptions are and what the next steps in learning are.
•Should be moderated and standardised to ensure **<u>purposeful, meaningful, and timely feedback.</u>**
•Includes feedback to pupils to help them understand what they need to improve, challenging them to achieve their target rather than a grade.
•Allows leaders and staff to make timely adaptations to the curriculum.



BHCET TAF

The BHCET TAF format forms an assessment framework for maths within, across and at the end of the year. This format of assessment provides consistency across current assessment of Writing and Reading within the Trust and links to the structure of assessment judgements, assessing maths at WTS, WTS+, EXS and GDS. This links to the reporting language that is used to assess maths across the year. It provides clear distinction between the assessment of maths at each standard and particularly between WTS and WTS+. The overview of objectives are fundamentally linked to NC expectations, creating year group specificity for the programmes of study. Each year group covers elements of number, measure, shape and space and statistics.

The TAF is provided in two forms.

1 – A progressive overview from Year 1 to Year 6.

As a refined, logical set of year group specific objectives this provides clarity of progression across year groups. These clear descriptors lead to an understanding of expectations between year groups. Such expectations allow staff to focus on the key elements that form the revision of previous learning and the year group specific new learning.

2 - Year group specific.

Focusing on year group specificity, this provides clear focus on the end of year expectations for writing. It provides a simple but thorough set of objectives to assess a collection of writing.