Mount Primary School

Maths

Curriculum Design

Long Term Plan & Progression

Maths Intent

At Mount Primary School we follow the National Curriculum objectives for maths. Over the last few years, all staff have received training on developing a Mastery approach for maths. As a school we have worked to develop a curriculum that will give children a deep, long-term and adaptable understanding of maths. Within all maths lessons 'The Five Big Ideas in Teaching for Mastery' will be evident.

A range of mathematical resources are used in lessons and children are encouraged to use concrete, pictorial and abstract methods to support their learning. We develop fluency for all pupils with number skills through varied and frequent practice so that children develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. We aim for children to develop reasoning skills, make generalisations and justify an argument using mathematical language. Within our maths curriculum all will have opportunities to identify patterns and make connections with other subjects and real life situations. Within maths lessons, there are lots of opportunities for talk and discussion. We encourage children to build resilience by working with others. Children are also taught to be tolerant of others' ideas and developing mutual respect by working together, sharing resources and listening to other ideas.

Maths Implementation

At Mount Primary School, we use Maths No Problem and White Rose as a resource for teaching Maths and all lesson follow the same structure. As a school we all start with teaching place value in the autumn term, we have made this decision as we feel these skills are a building block for maths. These skills can then be transferred into the teaching of the four operations. Staff will then build upon these skills and link these to other national curriculum objectives. For example, measure. We have clear progression across the curriculum as all year groups follow the national curriculum objectives. Children are given numerous opportunities to revisit aspects of learning through jotter time activities. These sessions are used to consolidate learning, revisit objectives from the main maths lessons and challenge children further. These activities are often linked to other areas of maths and we encourage children to transfer their skills.

Staff training is ongoing through work with the Cheshire and Wirral Maths Hub ensuring we share good practice and receive updates.

Within EYFS, teachers follow a similar structure to Years 1-6 Maths lessons. The children look at a number of a week and this is linked to a 'hook' for the children to investigate. Progression is demonstrated across the curriculum by the use of the CPA approach to maths. As part of the maths curriculum we offer at Mount Primary, children have regular fluency sessions. These sessions allow children to develop their recall and develop fluency skills. These lessons may follow on from the main maths lesson or they may be used for revisiting previous concepts. Recall of facts are taught by making connections, for example 6X6 is the same as 5X6 and 1X6. Children are also encouraged to use the facts that they know to help to solve problems. Children are then encouraged to use these facts within the main maths lesson to help them to solve more complex problems. Children in EYFS and Key Stage 1 regularly revisit number bonds for all numbers to 10 and 20. Children see these in a range of pictorial ways including whole part part, tens frame and equations. All children at Mount Primary will have the opportunity to use concrete resources to develop basic number skills and to help in recalling facts.

Maths Impact

Through discussion and feedback children talk enthusiastically about their maths lessons and their love of maths. Children in Key Stage 1 and Key Stage 2 understand why maths is used in the outside world and the part it will play in their future. Children use mathematical vocabulary during lessons and journaling demonstrates they are able to use a variety of methods independently, showing resilience when tackling challenging problems.
Children in Years 1-6 complete regular arithmetic and reasoning assessment papers. This data is then used to support teacher assessment and a focus of Pupil Progress meetings.

Maths Long Term Plan- F2								
	W1	**W2**	**W3**	**W4**	**W5**	**W6**	**W7**	**W8**
A1	**BASELINE** N: Practical counting activities Stamping number grid Order no cards Number writing	SSM:Build a model with 3d shapes Make a picture with 2d shapes and name shapes used Match 2d shapes to objects in environment Pattern strips Play where's teddy game	Number Songs Number Recognition/Value	**Noah's Ark** Match and Sort Guess My Rule Odd one out	**The Enormous Turnip** Compare amounts	**Wheres My Teddy** Size Mass Capacity Comparison	**My Mum and Dad make me Laugh** Pattern Copy recreate AB ABC Sound/Physical	Comparison of groups of numbers subitising 5 frames
Mastery	BASELINE	BASELINE	BASELINE	BASELINE	WK1 SUBITISING	WK2 COUNTING CARDINALITY ORDINALITY	WK3 COMPOSITION	WK4 SUBITISING
A2	1 2 3 **One Bear at Bedtime** Representing 123 **NB 1 2**	1 2 3 Composition 123 Comparing 123 **NB 3**	**Circle** Circles and Triangles **Rosies Walk** Positional Language	4 **Pete the cat and his four groovy buttons** Representing Numbers to 5	5 **Five Little Fiends** Representing Numbers to 5	5 **5 Currant Buns** **The Gingerbread Man** One more and one less	**Square** Shapes with 4 sides **NB 4** **The Fox in the Dark** **DOW song** Time -Seq day	
Mastery	WK5 COMPARISON	WK6 COUNTING, ORDINALITY, CARDINALITY	WK7 COMPARISON	WK8 COMPOSITION	WK9 COMPOSITION	WK10 COUNTING, ORDINALITY, CARDINALITY	Consolidate	
Sp1	0 **None the Number** Introduce zero **NB 0**	5 **Room on the Broom** Comparing numbers to 5	5 **The Ugly Five** Composition of 4/5 **NB Whole of me**	**The Blue Balloon** Compare Mass **A Beach for Albert** Compare Capacity	6 7 8 **Six Dinner Sid** **Ruff Spinderella** 6 7 8 **NB 6 7 8**	**Simons Sock** Making pairs Combining 2 groups	**Tall** Length Height **5 Minutes Peace** **DOW song** Time	
Mastery	WK 11 SUBITISING	WK12 COUNTING, ORDINALITY, CARDINALITY	WK13 COMPOSITION	WK14 COMPOSITION	WK15 COMPARISON	WK 16 COUNTING, ORDINALITY, CARDINALITY	Consolidate	
Sp2	9 10 **One Gorilla** Building 9 and 10 **NB 9 10**	10 **10 Little Collection** Comparing numbers to 10	10 **Barry the Fish with Fingers** Bonds to 10	**The Princess and the Pea** 3D Shape Pattern	Consolidate Identify gaps	CONSOLIDATION WEEK		
Mastery	WK18 COMPARISON	WK 19 SUBITISING	WK20 COMPOSITION	Consolidate	Consolidate			
Su1	**Twelve ways to make 11** Building numbers beyond 10 **NB 11 12**	**One is a snail 10 is a crab** Counting patterns beyond 10 **NB 13 Tween Scene**	**Which one doesn't belong** Spatial Reasoning Match, Rotate, Manipulate	**One Ted Fell Out of Bed** Adding more	**10 Little Dinosaurs** Taking away	**Grandpas Quilt** Compose and Decompose shapes		
Mastery	NUMBER BOND 5	NUMBER BOND 6	NUMBER BOND 7	NUMBER BOND 8	NUMBER BOND 9	NUMBER BOND 10		

Su2	**Double the Ducks** Doubling **Bean Thirteen** Sharing and Grouping **NB Double Trouble**	**One Odd Day** Odd and Even **NB Odd Even**	**Cockatoos** Spatial Reasoning Visualise and Build	**Billys Bucket** Deepening Understanding	**The Leopards Drum** Patterns and Relationships	**The Secret Path** Spatial Reasoning Mapping	Consolidate fluency expectations for EYFS	
Mastery	WK 21 COUNTING, ORDINALITY, CARDINALITY	WK 22 SUBITISING	WK 23 COMPOSITION	WK24 COMPOSITION	WK 25 COMPARISON	Consolidate fluency expectations for EYFS	Review learning and focus on any gaps.	

Maths Long Term Plan- Year 1								
	W1	**W2**	**W3**	**W4**	**W5**	**W6**	**W7**	**W8**
	Numbers to 10			**Number bonds**	**Addition within 10**		**Subtraction within 10**	
A1	Counting to 10 Counting objects to 10 Writing numbers to 10	Counting to 0 Comparing numbers of objects Ordering numbers	Ordering numbers Comparing numbers	Making number bonds Making number stories	Add by using number bonds Add by counting on Completing number sentences	Making addition stories Solving picture problems	Subtraction by crossing out Subtraction by using number bonds Counting back	
	Ongoing fluency skills Consolidate EYFS Objectives Counting forwards to 100 Recognising numbers to 10 Number bonds up to 5 Addition of two single digit numbers within 5							
	Subtraction within 10	**Positions**	**Numbers to 20**		**Consolidation week**	**Addition and subtraction within 20**		
A2	Subtraction stories Solving picture problems Addition and subtraction	Naming positions Naming positions in queues Left and right positions	Counting to 20 Writing to 20	Comparing numbers Ordering numbers Number patterns		Adding by counting on Add by making 10 Add by adding ones	Counting back Subtract by subtracting ones	Subtract from 10 Addition and subtraction facts
	Ongoing fluency skills Counting forwards and backwards to 100 Recognising numbers to 20 Number bonds up to 10 Addition of two single digit numbers- spotting number bonds							
	Shapes and Patterns		**Length and Height**		**Consolidation Weeks**			
Sp1	Recognising solids Recognising shapes	Grouping shapes Making patterns	Comparing Measuring length	Measuring height using body parts Measuring using a ruler				
	Ongoing fluency skills Counting forwards and backwards to 100 One more and one less than numbers to 10 Number bonds up to 10 Subtraction of two single digit numbers- spotting number bonds Doubling and halving							
	Numbers to 40			**Addition & Subtraction Word Problems**		**Multiplication**		
Sp2	Counting to 40 Writing to 40	Counting in tens and ones Comparing numbers	Finding how much more Making number patterns	Solving word problems	Solving word problems	Making equal groups Adding equal groups Making equal rows		
	Ongoing fluency skills Counting in 2's, 5's and 10's							

	One more and one less than numbers to 10 Number bonds up to 10/20 Addition and subtraction of two single digit numbers Doubling and halving							
	Multiplication	**Consolidation Week**	**Division**		**Numbers to 100**			
Su1	Making doubles Solving word problems		Grouping equally Sharing equally	Making halves Making quarters Sharing and grouping	Counting to 100 Finding tens and ones Comparing numbers Making number patterns			
	Ongoing fluency skills Counting in 2's, 5's and 10's One more and one less than numbers to 20 Number bonds up to 10/20 Addition and subtraction of two single digit numbers Doubling and halving							
	Time		**Money**	**Volume & Capacity**	**Mass**	**Space**	**Consolidation Week**	
Su2	Telling time to the hour Telling time to the half hour	Using next, before, after Estimating Comparing Using a calendar	Recognising coins Recognising notes	Comparing V&C Finding V&C Describing using ½ and 1/4	Comparing mass Finding mass	Describing positions Describing movements Making turns		
	Ongoing fluency skills Counting in 2's, 5's and 10's One more and one less than numbers to 20 Number bonds up to 10/20 Addition and subtraction of two single digit numbers Doubling and halving							

Maths Long Term Plan- Year 2								
	W1	**W2**	**W3**	**W4**	**W5**	**W6**	**W7**	**W8**
	Numbers to 100			**Addition and Subtraction**			**Consolidation Week**	
A1	Counting to 100 Place Value	Comparing numbers Number bonds	Number patterns	Simple Adding	Simple Subtraction	Addition and subtraction with renaming Addition of three numbers		
	Ongoing fluency skills Consolidate Year 1 objectives Place value – tens and ones Counting forwards and backwards to 100 Consolidate number bonds <, > and = Addition and subtraction of two single digit numbers							
	Multiplication of 2, 5 and 10		**Multiplication and division of 2, 5 and 10**			**Length**		**Temperature**
A2	Multiplication of equal groups 2 Times Table 5 Times Table	10 Times Table Multiplying by 2, 5 and 10 Word Problems	Grouping Sharing Dividing by 2	Diving by 5 Dividing by 10 Multiplication and division	Solving word problems Odd and even numbers	Measuring length in m Measuring length in cm Comparing length in m Comparing length in cm	Comparing length of lines Solving word problems	Reading temperature Estimating temperature
	Ongoing fluency skills Number bonds- 100 Place value – tens and one, comparing numbers, more/less Counting in 2, 5 and 10 Multiplication facts – 2, 5 and 10 Addition and subtraction- single digit, two digit and 1 digit							
	Fractions				**Money**			
Sp1	Making equal parts Showing half and quarter Showing quarters	Showing thirds Naming fractions Making equal fractions Comparing and ordering fractions	Comparing and ordering fractions Counting wholes and parts Counting in halves Counting in quarters	Finding part of a set Finding part of a quantity	Writing amounts of money Counting money Showing equal amounts of money	Exchanging money Comparing amounts of money Calculating total amount Calculating change Solving word problems		
	Ongoing fluency skills Place value- tens and one Multiplication facts- 2, 5 and 10 Division facts- 2, 5 and 10 Addition and subtraction- two digit + 10s, number bonds to 100 <, > and =							

	Time			**Mass**		**Picture Graphs**		
Sp2	Telling & writing the time to 5 minutes Telling and writing time Sequence events Drawing clock hands	Finding durations of time Finding ending times	Finding starting times Comparing times	Measuring mass in kg Measuring mass in g Comparing mass of two objects	Comparing mass of three objects Solving word problems	Reading picture graphs		
	Ongoing fluency skills Place value Fractions- 1/2 , ¼, ¾ and 1/3 of an amount Addition and subtraction- two digit and two digit (no renaming) Addition and subtraction- with renaming Multiplication and division- 2, 5 and 10s							
	More word problems	**Key Stage 1 SATs revision**						
Su1	Solving word problems							
	Ongoing fluency skills Arithmetic questions Reasoning questions							
	2d Shapes		**3d Shapes**		**Volume**			
Su2	Identifying sides Identifying vertices Identifying lines of symmetry Making figures Sorting shapes	Drawing shapes Making patterns Describing patterns Moving shapes Turning shapes	Recognising three-dimensional shapes Describing 3d shapes	Grouping 3d shapes Forming 3d structures Making patterns	Comparing volume Measuring volume in litres Measuring volume in millilitres	Solving word problems		
	Ongoing fluency skills Place value Fractions- 1/2 , ¼, ¾ and 1/3 of an amount Addition and subtraction- two digit and two digit (no renaming) Addition and subtraction- with renaming Multiplication and division- 2, 5 and 10s							

Maths Long Term Plan- Year 3								
	W1	**W2**	**W3**	**W4**	**W5**	**W6**	**W7**	**W8**
	Numbers to 1000		**Addition and Subtraction**					
A1	Counting in hundreds Counting in 100s, 10s and 1s Place value Comparing and ordering numbers	Counting in fifties Number patterns Counting in 4 and 8	Addition and subtraction facts Simple adding	Simple adding Adding with renaming	Simple subtract ting	Subtracting with renaming Using models	Using models	
	Ongoing fluency skills Consolidation of Y2 objectives Place value- ones, tens and hundreds < > = Ordering 3 digit numbers Counting in 4 and 8							
	Multiplication and Division			**Further Multiplication and Division**			**Length**	
A2	Multiplying by 3 Multiplying by 4 Multiplying by 4 and 8	Multiplying by 8 Dividing by 3 Dividing by 4	Dividing by 4 and 8 Solving word problems	Multiplying- 2 digit number Multiplying with regrouping	Simple dividing Dividing with regrouping	Solving word problems	Writing length m and cm Writing length in cm Writing length in m Writing length in km and m	Comparing length Solving word problem
	Ongoing fluency skills Place value Addition and subtraction – no renaming Addition and subtraction- with renaming Times tables- 2, 5, 10, 3, 5, 8							
	Mass		**Volume**		**Money**			
Sp1	Reading weighing scales	Solving word problems	Measuring volume in ml and l Measuring capacity in ml and l Writing volume in l and ml	Writing capacity in l and ml Solving word problems	Naming amounts of money Showing amounts of money	Adding money Subtracting money Calculating change Solving word problems		
	Ongoing fluency skills Times tables- 2, 5, 10, 3, 5, 8 Addition and subtraction- renaming up to 3 digit numbers Place value – 3 digit numbers							
	Time			**Picture graphs and bar graphs**	**Fractions**			
Sp2	Telling the time	Measuring and comparing time in seconds	Measuring time in minutes Finding number of days	Drawing picture graphs Drawing bar graphs Reading bar graphs	Counting in tenths Making number pairs Adding fractions	Finding equivalent fractions		

		Measuring time in seconds Measuring time in hours			Subtracting fractions			
	Ongoing fluency skills Times tables- 2, 5, 10, 3, 5, 8 Multiplying with regrouping Dividing with regrouping Adding/subtracting money							
	Fractions				**Consolidation week**			
Su1	Finding the simplest fraction Finding equivalent fractions Comparing fractions	Adding fractions Subtracting fractions Finding part of a set	Finding the fraction of a number Sharing one Sharing more than 1	Solving word problems				
	Ongoing fluency skills Times tables- 2, 5, 10, 3, 5, 8 Equivalent fractions Adding and subtracting fractions							
	Angles	**Lines and Shapes**		**Perimeter of figures**				
Su2	Making angles Finding angles in shapes Finding right angles Comparing angles Making turns	Identifying perpendicular lines Identifying parallel lines Finding vertical and horizontal lines Describing 2d shapes	Drawing 2d shapes Making 3d shapes Describing 3d shapes	Measuring a total length around a shape Measuring perimeter	Calculating perimeter			
	Ongoing fluency skills Times tables- 2, 5, 10, 3, 5, 8 Addition and subtracting – 3 digit numbers with renaming Addition and subtraction – links to measure							

Maths Long Term Plan- Year 4								
	W1	**W2**	**W3**	**W4**	**W5**	**W6**	**W7**	**W8**
	Numbers to 10 000			**Addition and Subtraction within 10 000**				
A1	Counting in hundreds and twenty-fives Counting in thousands Counting thousands, hundreds, tens and ones Using place value	Comparing and ordering numbers Making number patterns Counting in sixes, sevens and nines	Rounding numbers Rounding numbers to estimate	Finding sums Adding with renaming	Adding using mental strategies Finding difference	Subtracting with renaming Subtracting using mental strategies	Solving word problems	
	Ongoing fluency skills Consolidation of Y3 objectives Place value- comparing numbers Multiplication facts – up to 12 x 12							
	Multiplication and Division				**Further Multiplication and Division**			
A2	Multiplying by 6 Multiplying by 7 Multiplying by 9	Multiplying by 11 Multiplying by 12 Dividing by 6 Dividing by 7	Dividing by 9 Multiplying and dividing by 11 and 12 Dividing with remainders	Solving word problems	Multiplying by 0 and 1 Dividing by 1 Multiplying the same two numbers Multiplying three numbers	Multiplying multiples of 10 Multiplying 2 digit numbers Multiplying multiples of 100	Multiplying 3 digit numbers Dividing 2 digit numbers Dividing 3 digit numbers	Solving word problems
	Ongoing fluency skills Add and subtract 1s, 10s. 100s and 1000s Multiplication facts – up to 12 x 12							
	Graphs	**Fractions**			**Time**			
Sp1	Drawing and reading picture graphs and bar graphs Drawing and reading bar graphs Drawing and reading line graphs	Counting in hundredths Writing mixed numbers Showing mixed numbers on a number line Finding equivalent fractions	Simplifying mixed numbers Simplifying improper fractions Adding fractions	Subtracting fractions Solving word problems	Telling time on a 24 hr clock Changing time in minutes to seconds Changing time in hours to minutes	Solving problems of a duration of time Changing years to months and weeks to days		
	Ongoing fluency skills Use measure and comparisons to understand scaling Multiplication – 7s, 9s, 11s 12s Count in 25s and 1000s							
	Decimals				**Money**			
Sp2	Writing tenths Writing hundredths	Writing hundredths Writing decimals	Comparing and ordering decimals Rounding decimals	Writing fractions as decimals	Writing amounts of money	Rounding amounts of money		

				Dividing whole numbers by 10 Dividing whole numbers by 100	Comparing amounts of money	Solving problems involving money		
	Ongoing fluency skills Multiplication – 7s, 9s, 11s 12s Count in fractions and decimals Negative numbers							
	Mass, Volume and Length			**Area of figures**	**Consolidation week**			
Su1	Measuring mass Converting units of mass Measuring volume	Measuring volume Measuring height Measuring length	Converting units of length Measuring perimeter in different units Solving problems	Measuring the surface that an object covers Measuring area				
	Ongoing fluency skills All multiplication facts 12 x 12 Count in 7s, 9s, 25s and 1000s							
	Geometry		**Position and Movement**	**Roman Numerals**	**Consolidation of Learning**			
Su2	Types of angles Comparing angles Classifying triangles Classifying quadrilaterals Identifying symmetrical figures	Drawing lines of symmetry Completing symmetrical figures Making symmetrical figures Completing symmetrical figures Sorting shapes	Describing position Plotting points	Writing roman numerals for 1 to 20 Writing roman numerals to 100				
	Ongoing fluency skills Fractions Time							

Maths Long Term Plan- Year 5								
	W1	**W2**	**W3**	**W4**	**W5**	**W6**	**W7**	**W8**
	Numbers to 1 000 000			**Whole numbers: Addition and Subtraction**			**Consolidation Week**	
A1	Reading and writing numbers to 100 000 Reading and writing numbers to 1 000 000	Comparing numbers to 1 000 000	Making number patterns Rounding numbers	Counting on to add Counting backwards to subtract Adding within 1 000 000	Adding and subtracting within 1 000 000 Subtracting within 1 000 000	Adding and subtracting within 1 000 000		
	Ongoing fluency skills Consolidate Y4 objectives Place value – up to 1 000 000							
	Whole numbers: Multiplication and Division				**Whole number: word problems**	**Graphs**		**Consolidation Week**
A2	Finding multiples Finding factors Finding common factors Finding prime numbers	Finding square and cube numbers Multiplying by 10, 100 and 1000 Multiplying 2 digit and 3 digit numbers by a single digit Multiplying 4 digit numbers	Multiplying a 2 digit number by 2 digit number Multiplying a 3 digit number by 2 digit number	Dividing by 10, 100 and 1000 Dividing 3 digit and 4 digit numbers Dividing 4 digits numbers Dividing with remainders	Solving word problems	Reading tables	Reading line graphs	
	Ongoing fluency skills Addition and subtraction within 1 000 000 Multiplication- 12 x 12 Rounding numbers							
	Fractions					**Consolidation week**		
Sp1	Dividing to make fractions Writing improper fractions and mixed numbers Finding equivalent fractions Comparing and ordering fractions	Comparing and ordering fractions Making number pairs Adding fractions	Adding fractions Subtracting fractions	Subtracting fractions	Multiplying fractions by whole numbers Multiplying mixed numbers			
	Ongoing fluency skills Dividing by 10, 100 and 1000 Multiplication – 10, 100 and 1000 Square and cube numbers							
	Decimals				**Percentages**	**Consolidation week**		
Sp2	Writing decimals Reading and writing decimals Comparing decimals	Comparing decimals Writing fractions as decimals	Adding and subtracting decimals Rounding decimals		Comparing quantities Finding percentages			

		Adding and subtracting decimals						
	Ongoing fluency skills Adding fractions Subtracting fractions Rounding decimals							
	Geometry			**Position and Movement**	**Roman Numerals**			
Su1	Knowing types of angles Measuring angles Investigating angles on a line	Investigating angles on a point Drawing angles /lines Describing squares and rectangles	Investigating angles in squares and rectangles Solving problems Investigating regular polygons	Naming and plotting points Describing translations Describing movements Successive reflections	Writing Roman Numerals to 1000 Writing years in Roman Numerals			
	Ongoing fluency skills Finding percentages Writing fractions as decimals Multiplication and division							
	Measurements		**Area and Perimeter**		**Volume**			
Su2	Converting units of length	Converting units of mass Telling the temperature	Finding the perimeter Using scale diagrams to find the perimeter	Measuring the area Estimating the area	Understanding volume of solids Finding the volume of solids Finding the capacity of rectangular boxes	Converting units of volume Solving word problems involving volume		
	Ongoing fluency skills Place value Addition and subtraction within 1 000 000 Roman numerals							

Maths Long Term Plan- Year 6								
	W1	**W2**	**W3**	**W4**	**W5**	**W6**	**W7**	**W8**
	Place Value		**Addition, subtraction, multiplication and division**					
A1	Numbers to 10 000 Numbers to 100 000 Numbers to a million Numbers to 10 million Compare and order any numbers	Round numbers to 10, 100 and 1000 Round any number Negative numbers	Add whole numbers with more than 4 digits Subtract whole numbers with more than 4 digits Inverse operations Multi-step problems	Add and subtract integers Multiply 4 digit by 1 digit Multiply 2 digits (area model) Multiply 2 digit by 2 digit Multiply 3 digits by 2 digits	Multiply 4 digit by 2 digit Divide 4 digit by 1 digit Divide with remainders Short division Division using factors	Long division Factors Common factors Common multiples	Prime to 100 Squares and cubes Oder of operations Mental calculations and estimation Reason for known facts	
	Ongoing fluency skills Consolidate Y5 objectives Place value- numbers up to 10 million							
	Fractions				**Decimals and Percentages**			
A2	Equivalent fractions Simplify fractions Improper fractions to mixed numbers Mixed numbers to improper fractions Fractions on a number line Compare and order (denominator)	Compare and order (numerator) Add and subtract fractions Add mixed number Add fractions	Subtract mixed numbers Subtract fractions Mixed addition and subtraction Multiply fractions by integers Multiply fractions by fractions	Divide fractions by integers Four rules with fractions Fraction of an amount Fraction of an amount- find the whole	Decimals up to 2 d.p Understand thousandths Three decimal places Multiply by 10, 100, 1000 Divide by 10, 100, 1000 Multiply decimals by integers	Division to solve problems Decimals as a fraction Fractions to decimals	Understand percentages Fractions to percentages Equivalent FDP Order FDP	Percentages of an amount Percentages- missing values
	Ongoing fluency skills Multiplication- 2 digit x 3 digit, 3 digit x 2 digit Division with remainders Short and long division Common factors and multiples Add and subtract fractions Add mixed fractions							
	Converting Units		**Perimeter, area and volume**		**Shape**			
Sp1	Metric measures Convert metric measures Calculate with metric measures	Miles and kilometres Imperial measures	Shapes- same area Area and perimeter Area of a triangle	Area of a parallelogram Volume- counting cubes Volume of a cuboid	Measure with a protractor Draw lines and angles Introduce angles	Angles in a triangle – including special cases and missing angles Angles in special quadrilaterals		

					Angles on a straight line Angles around a point Calculate angles Vertically opposite angles	Angles in regular polygons Draw shapes accurately Draw nets of 3D shapes		
	Ongoing fluency skills Decimals as a fraction Fractions to decimals Fractions to percentages Percentage of an amount Area of shapes Angles in shape							
	Ratio		**Statistics**		**Position and direction**	**Consolidation Week**		
Sp2	Use ratio language Ratio and fractions Introducing the ratio symbol	Calculating ratio Using scale factors Calculating scale factors Ratio and proportion problems	Read and interpret line graphs Draw line graphs Using line graphs to solve problems Circles	Read and interpret pie charts Pie charts with percentages Draw pie charts The mean	The first quadrant Four quadrants Translations Reflections			
	Ongoing fluency skills Consolidate Y6 objectives							
	Algebra							
Su1	Find a rule- one step Find a rule- two step Forming expressions Substitution Formulae	Forming equations Solve simple one-step equations Solve two step equations Find pairs of values						
	Ongoing fluency skills Consolidate Y6 objectives							
Su2								
	Ongoing fluency skills							

Progression Map and Statutory Requirements

Number and Place Value						
F2	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Identify how many objects there are in a group of up to 10 objects, recognising smaller groups on sight and counting the objects in larger groups up to 10 Demonstrate an understanding that the last number counted represents the total number of the count. Represent numbers in numerals from 0 to 9. Count to 20, demonstrating that the next number in the count is one more and the previous number is one less. Use real-life materials (e.g. apples or crayons) to add and subtract 1 from a group of objects and indicate how many are now present.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count and read numbers to 100 in numerals Count and write numbers to 100 in numerals Count in multiples of twos, fives and tens from 0 Identify one more and one less of a given number Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Read and write numbers from 1 to 20 in numerals. Read and write numbers from 1 to 20 in words. Count in twos, fives and tens to solve problems e.g. count the number of chairs in a diagram when the chairs are organised in 7 rows of 5 by counting in fives Partition and combine numbers using apparatus if required e.g. partition 76 into tens and ones; combine 6 tens and 4 ones	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. Recognise the place value of each digit in a two-digit number (tens, ones). Identify, represent and estimate numbers using different representations, including the number line. Compare and order numbers from 0 up to 100; use and = signs. Read and write numbers to at least 100 in numerals. Read and write numbers to at least 100 in words. Use place value and number facts to solve problems. Partition two-digit numbers into different combinations of tens and ones using apparatus if needed e.g. 23 is the same as 2 tens and 3 ones which is the same as 1 ten and 13 ones. Use reasoning about numbers and relationships to solve more complex problems and explain his/her thinking e.g. 29 + 17 = 15 + 4 + ?; 'Together Jack and Sam have £14. Jack has £2 more than Sam. How much money does Sam have?' etc. Recall the multiples of 10 below and above any given 2 digit number e.g. say that for 67 the multiples are 60 and 70.	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). Compare and order numbers up to 1000. identify, represent and estimate numbers using different representations Read and write numbers up to 1000 in numerals Read and write numbers up to 1000 in words. Solve number problems and practical problems involving these ideas.	Count in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number. Count backwards through zero to include negative numbers. Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) Order and compare numbers beyond 1000. Identify, represent and estimate numbers using different representations including measures. Round any number to the nearest 10, 100 or 1000. Solve number and practical problems that involve all of the above and with increasingly large positive numbers. 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.	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit e.g. what is the value of the '7' in 276,541? Find the difference between the largest and smallest whole numbers that can be made from using three digits Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Solve number problems and practical problems that involve ordering and comparing numbers to 1 000 000, counting forwards or backwards in steps, interpreting negative numbers and rounding. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals	Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. Round any whole number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero. Solve number and practical problems that involve ordering and comparing numbers to 10 000 000, rounding to a required degree of accuracy, using negative numbers and calculating intervals across zero. Demonstrate an understanding of place value including decimals e.g. 28.13 = 28 + ? + 0.03.

Addition and Subtraction						
F2	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Demonstrate an understanding that the total number of objects changes when objects are added or taken away. Demonstrate an understanding that the number of objects remains the same when they are rearranged, providing nothing has been added or taken away Solve number problems involving the addition and subtraction of single-digit numbers up to 10 Demonstrate an understanding of the composition of numbers to 5 and a developing ability to recall number bonds to and within 5 (e.g. 2 + 2 = 4 and 3 + 1 = 4).	Read and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Write mathematical statements involving addition (+), subtraction (-) and equals (=) signs Demonstrate an understanding of the commutative law (e.g. 3 + 2 = 5, therefore 2 + 3 = 5) Demonstrate an understanding of inverse relationships involving addition and subtraction (e.g. if 3 + 2 = 5, then 5 - 2 = 3) Recall at least four of the six number bonds for 10 and reason about associated facts (e.g. 6 + 4 = 10 , therefore 4 + 6 = 10 and 10 - 6 = 4). Represent and use number bonds within 20 Represent and use subtraction facts within 20. Add one-digit and two-digit numbers to 20, including zero. Subtract one-digit and two-digit numbers to 20, including zero.	Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures. Solve problems with addition and subtraction applying his/her increasing knowledge of written methods and mental methods where regrouping may be required. Recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships (e.g. If 7 + 3 = 10, then 17 + 3 = 20; if 7 - 3 = 4, then 17 - 3 = 14; leading to if 14 + 3 = 17, then 3 + 14 = 17, 17 - 14 = 3 and 17 - 3 = 14). Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Add and subtract numbers where no regrouping is required, using concrete objects, pictorial representations, and mentally, including a two-digit number and ones.	Add and subtract numbers mentally, including a three-digit number and ones. Add numbers with up to three digits using the formal method of columnar addition Add and subtract numbers mentally, including a three-digit number and tens. Subtract numbers with up to three digits using the formal method of columnar subtraction Add and subtract numbers mentally, including a three-digit number and hundreds. 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.	Add numbers with up to four digits using the formal method of columnar addition. Estimate and use inverse operations to check answers to a calculation. Subtract numbers with up to four digits using the formal method of columnar subtraction Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Add and subtract numbers mentally with increasingly large numbers 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.	Perform mental calculations with mixed operations to carry out calculations involving the four operations Solve multi-step problems in contexts, deciding which operations and methods to use and why e.g. find the change from £20 for three items that cost £1.24, £7.92 and £2.55; a roll of material is 6m long: how much is left when 5 pieces of 1.15m are cut from the roll?; a bottle of drink is 1.5 litres, how many cups of 175ml can be filled from the bottle, and how much drink is left?. Solve problems involving addition and subtraction. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

	Solve one-step problems that involve addition, subtraction and missing numbers using concrete objects and pictorial representations	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including a two digit number and tens. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including 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. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. Recall doubles and halves to 20 e.g. knowing that double 2 is 4, double 5 is 10 and half of 18 is 9 Use estimation to check that his/her answers to a calculation are reasonable e.g. knowing that 48 + 35 will be less than 100 Solve missing number problems using addition and subtraction				

Multiplication and Division						
F2	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
	Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. Solve one-step problems involving division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Solve problems involving multiplication and division, using concrete materials and mental methods. Solve problems involving multiplication and division, using arrays, repeated addition and multiplication and division facts, including problems in contexts e.g. knowing that 2 × 7 = 14 and 2 × 8 = 16, explains that making pairs of socks from 15 identical socks will give 7 pairs and one sock will be left Use multiplication and division facts for 2, 5 and 10 to make deductions outside known multiplication facts e.g. know that multiples of 5 have one digit of 0 or 5 and use this to reason that 18 × 5 cannot be 92 as it is not a multiple of 5	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 he/she knows, including for two-digit numbers times one digit numbers, using mental and progressing to formal written methods. Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	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 Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. 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	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. 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 Multiply and divide numbers mentally drawing upon known facts. 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 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Recognise and use square numbers and the notation for squared (2). Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	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 long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. Perform mental calculations, including with mixed operations and large numbers Identify common factors, common multiples and prime numbers. Use his/her knowledge of the order of operations to carry out calculations involving the four operations. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving addition, subtraction, multiplication and division

		Solve word problems involving multiplication and division with more than one step e.g. which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet Recognise the relationships between addition and subtraction and rewrite addition statements as simplified multiplication statements e.g. 10 + 10 + 10 + 5 + 5 = 3 × 10 + 2 × 5 = 4 × 10			Recognise and use cube numbers and the notation for cubed (3). 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.	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

Fractions						
F2	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
	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.	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity and demonstrate understanding that all parts must be equal parts of the whole Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2.	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. Recognise and show, using diagrams, equivalent fractions with small denominators. Add fractions with the same denominator within one whole e.g. 5/7 + 1/7 = 6/7. Subtract fractions with the same denominator within one whole e.g. 6/7 - 1/7 = 5/7. Compare and order unit fractions, and fractions with the same denominators. Solve fraction problems. Record 1/10 as 0.1, 3/10 as 0.3 etc.	Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number Add and subtract fractions with the same denominator Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to 1/4, 1/2, ¾ Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. Round decimals with one decimal place to the nearest whole number Compare numbers with the same number of decimal places up to two decimal places. Solve simple measure and money problems involving fractions and decimals to two decimal places.	Compare and order fractions whose denominators are all multiples of the same number Identify and name equivalent fractions of a given fraction, represented visually, including tenths and hundredths Write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number e.g. 2/5 + 4/5 = 6/5 = 1 1/5. Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. Read and write decimal numbers as fractions e.g. 0.71 = 71/100, 8.09 = 8 + 9/?. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Round decimals with two decimal places to the nearest whole number and to one decimal place. Read, write, order and compare numbers with up to three decimal places	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions > 1 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 e.g. 1/4 × 1/2 = 1/8. Divide proper fractions by whole numbers e.g. 1/3 ÷ 2 = 1/6. Associate a fraction with division and calculate decimal fraction equivalents e.g. know that 7 divided by 21 is the same as 7/21 and that this is equal to 1/3 and e.g. 0.375 is equivalent to 3/8. Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places Multiply one-digit numbers with up to two decimal places by whole numbers Use written division methods in cases where the answer has up to two decimal places Solve problems which require answers to be rounded to specified degrees of accuracy.

					Solve problems involving number up to three decimal places. Recognise the percent symbol (%) and understand that percent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25.	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts e.g. one piece of cake that has been cut into 5 equal slices can be expressed as 1/5 or 0.2 or 20% of the whole cake.

Measures						
F2	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
	Compare, describe and solve practical problems for lengths and heights e.g. long/short, longer/shorter, tall/short, double/half. Compare, describe and solve practical problems for mass/weight e.g. heavy/light, heavier than, lighter than Compare, describe and solve practical problems for capacity and volume e.g. full/empty, more than, less than, half, half full, quarter. Compare, describe and solve practical problems for time e.g. quicker, slower, earlier, later. Measure and begin to record mass/weight. Measure and begin to record capacity and volume Measure and begin to record time (hours, minutes, seconds). Recognise and know the value of different denominations of coins and notes. Sequence events in chronological order using language e.g. before and after, next, first, today,	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 Compare and order lengths, mass, volume/capacity and record the results using >, < and =. 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 change. Compare and sequence intervals of time. 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.	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 Tell the time from an analogue clock, including using Roman numerals from I to XII, and 12- hour and 24-hour clocks. Write the time using an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events e.g. to calculate the	Convert between different units of measure e.g. kilometre to metre; hour to minute Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Find the area of rectilinear shapes by counting squares Estimate, compare and calculate different measures, including money in pounds and pence Read, write and convert time between analogue and digital 12- and 24-hour clocks. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes Estimate volume e.g. using 1 cm^3 blocks to build cuboids (including cubes) and capacity e.g. using water. Solve problems involving converting between units of time. Use all four operations to solve problems involving measure e.g. length, mass, volume, money using	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. 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 Convert between miles and kilometres. Recognise that shapes with the same areas can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume of shapes Calculate the area of parallelograms and triangles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units e.g. mm^3 and km^3.

	yesterday, tomorrow, morning, afternoon and evening Recognise and use language relating to dates, including days of the week, weeks, months and years. Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times Measure and begin to record length/height	Remember the number of minutes in an hour and the number of hours in a day Read scales in divisions of ones, twos, fives and tens Read scales where not all numbers on the scale are given and estimate points in between. Read the time on a clock to the nearest 15 minutes	time taken by particular events or tasks.		decimal notation, including scaling	

Shape						
F2	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Copy and continue more advanced patterns using real-life materials (e.g. apple, apple, orange, apple, apple, orange, etc.	Recognise and name common 2- D shapes e.g. rectangles (including squares), circles and triangles Recognise and name common 3- D shapes e.g. cuboids (including cubes), pyramids and spheres. Describe position, direction and movement, including whole, half, quarter and three-quarter turns	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 Name some common 2-D and 3-D shapes from a group of shapes or from pictures of the shapes and describe some of their properties (e.g. triangles, rectangles, squares, circles, cuboids, cubes, pyramids and spheres). Identify 2-D shapes on the surface of 3-D shapes e.g. a circle on a cylinder and a triangle on a pyramid. Compare and sort common 2-D and 3-D shapes and everyday objects describing similarities and differences e.g. find 2 different 2-D shapes that only have one line of symmetry; that a cube and a cuboid have the same number of edges, faces and vertices and describe what is different about them. Order and arrange combinations of mathematical objects in patterns and sequences.	Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. Recognise angles as a property of shape or a description of a turn. Identify right angles and identify whether other angles are greater or less than a right angle. Recognise that two right angles make a half turn, three make three quarters of a turn and four a complete turn Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	Identify acute and obtuse angles and compare and order angles up to two right angles by size. Identify lines of symmetry in 2-D shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry Begin to recognise where angles are greater than two right angles. Know the term straight angle referring to two right angles together. Describe positions on a 2-D grid as coordinates in the first quadrant.	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (°) Identify angles at a point and one whole turn (total 360°) Identify angles at a point on a straight line and 1/2 a turn (total 180° Identify other multiples of 90°. 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. 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	Draw 2-D shapes using given dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Describe positions on the full coordinate grid (all four quadrants). Draw and translate simple shapes on the coordinate plane, and reflect them in the axis

		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).				

Statistics				
Y2	**Y3**	**Y4**	**Y5**	**Y6**
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	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	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.	Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables, including timetables	Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as an average

Ratio and Proportion	Algebra
Y6	**Y6**
Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts e.g. find 7/9 of 108 Solve problems involving the calculation of percentages e.g. of measures, and such as 15% of 360 and the use of percentages for comparison Solve problems involving similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	Use simple formulae e.g. perimeter of a rectangle or area of a triangle. Generate and describe linear number sequences. Express missing number problems algebraically Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables.

Year 1 Vocabulary

Number and Calculation

Same
Different
Count (ing)
Forwards
Backwards
Share
Left over
More (than)
Less (than)
Total
Fewer
Equal
Most
Least
Sum
Difference
Difference between
Total
First
Plus
Addition
Subtraction
Minus
Ones
Tens
Columns
Multiples
First
Second
Third
Fourth
Order
Number
Amount
Value

Size
Odd
Even
Number line
Double
Halve
Pair
How much
How many
Larger
Smaller
Estimate
Compare
Together
Altogether
Bonds
Zero
Between
Above
Below

Measurement

Time
Year
Month
Week
Weekend
Day
Days of the week
Months of the year
Night
Hour
Second
Minute
Morning
Afternoon
Evening
Yesterday
Today
Tomorrow
Before
After
Old
New
Clock
O'clock
Half past
Birthday
Hour
Minute
Past
To
Fast
Quick
Slow
Early
Earlier
Late
Later

Mass
Weigh
Weight
Heavy
Heavier
Heaviest
Light
Lighter
Lightest
Balance
Scales
Ruler

Length
Long
Short
Gram
Kilogram
Centimetre
Metre
Far
Distance
Measure

Capacity
Volume
Full
Empty
More than
Less than
Half full

Money
coin
note
amount
penny/p
pound/£
one pence
two pence
five pence
ten pence
twenty pence
fifty pence

Fractions

Half
Quarters
Sharing
Grouping
Part
Whole
Equal parts
Same size
Bar

Geometry

Shape Properties
Pattern
2-D
Rectangle
Square
Circle
triangle
3-D
Cube
Cuboid
Pyramid
Sphere
sides

Position and direction

Left
Right
Top
Middle
Bottom
In front of
Behind
In between
Above
Below
Around
Near
Far
Close
Up
Down
Forwards
Backwards
Inside
Outside
Clockwise

Year 2 Vocabulary

Number and Calculation	Measurement					Fractions	Geometry
Digit Numeral Twenty one., twenty two, twenty three…. Multiple Commutative Place value Step counting >greater than <less than Partition Place holder Place value Estimate Estimation Inverse Array Calculate Multiplication Division Times tables	**Time** Analogue Five/ten Past/to Clockwise Anticlockwise	**Mass** Gram Kilogram	**Length** Height Width Metre Centimetre Millimetre	**Capacity** Litre Millilitre	**Money** Price Cost Amount Change **Temperature** Degrees Celsius Thermometer	Thirds Sharing Grouping Two quarters Equivalent Half as much Twice as much Numerator Denominator	**Shape Properties** Vertical Horizontal Vertices Edges Faces Quadrilateral Polygon Prism Cone symmetry
						Statistics	
						Pictogram Tally chart Block diagram Table Data Categories	**Position and direction** Straight Curved Rotate Rotation Angle Right angle

Year 3 Vocabulary

Number and Calculation	Measurement	Fractions	Geometry
Hundreds One hundred and one, one hundred and two….. One thousand Multiples Inverse operations Integers Decimals Remainder	Millimetre Perimeter Roman numerals to XII Am/pm Duration Noon Midnight analogue clock Digital clock	Fifths Sixths Sevenths Eighths Ninths Tenths Numerator Denominator Order Unit-fraction Non-unit fraction	Orientation Degree Right angle Perpendicular Parallel Horizontal Vertical Quadrilateral Polygon Polyhedron Polyhedral Acute Obtuse Reflex Reflection
		Statistics	
		Interpret Data Categories Scale	

Year 4 Vocabulary

Number and Calculation	Measurement	Fractions	Geometry
Thousands Round Rounding Roman numerals to 100 'C' Negative Operation Factor Factor pairs Distributive Associative Derive Remainder	Convert Conversion Rectilinear Area Dimensions Kilometre 24-hour clock	Hundredths Decimal equivalents Decimal places Proportion	Orientation Degrees Right angle Perpendicular Parallel Horizontal Vertical Quadrilateral Classify Polygon Pentagon Hexagon Heptagon Octagon Nonagon Decagon Polyhedron Polyherda Acute Obtuse Isosceles Scalene Equilateral Parallelogram Rhombus Trapezium Protractor Regular Irregular Reflex Coordinates Quadrant Plot Grid
		Statistics	
		Label Graph	

Year 5 Vocabulary

Number and Calculation	Measurement	Fractions	Geometry
Millions Roman numerals to 1000 (M) Linear sequence Power Prime Complement Composite Prime factor Squared Cubed Equivalence	Composite Metric Imperial Inch Foot Yard Mile Pound Pint Cm2 Cm3 M2 M3	Mixed number Thousandths Percent Percentages	Orientation Degree(s) Right angle Perpendicular Parallel Diagonal Horizontal Vertical Quadrilateral Polygon Polyhedron Polyhedral Acute Obtuse Reflex Point Reflection 180° 360° X-axis Y-axis
		Statistics	
		Interpret Data	

Year 6 Vocabulary

Number and Calculation	Measurement	Fractions	Geometry
Interval Long division Multi-step Common factors Common multiples	Mm3 Km3 Speed Mph m/s km/h	Simplify Degrees of accuracy	Quadrants Dissect(ion) Nets Radius Diameter Circumference Vertically opposite Complementary angles Pi
Ratio and Proportion	**Algebra**	**Statistics**	
Reflective size Scale factor Proportion Ratio as a:b	Symbol Letter Formula(e) Sequence Algebraic(ally) Equation Unknown Variable Constant Generalise	Pie chart Mean Average Data set	