



Maths Subject Overview

Number	Measurement	Geometry	Statistics
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Red – Ready to Progress Criteria

Teaching for Mastery

Our scheme of learning, based on the 'White Rose Scheme' is designed to support a mastery approach to teaching and learning and is consistent with the aims and objectives of the National Curriculum.

• Putting Number First

Our scheme has number at its heart. A significant amount of time is spent reinforcing number in order to build competency and ensure children can confidently access the rest of the curriculum.

• Depth Before Breadth

Our aim is for children to acquire depth of knowledge within each topic. Opportunities to revisit previously learned skills are built into later units of work.

• Working Together

Children work together on the same schemes of work, with learning adapted as and when necessary to allow access for all. Children of all abilities are encouraged to support each other in their learning.

• Fluency, Reasoning and Problem Solving

Our scheme develops all three key areas of the National Curriculum, giving children the knowledge and skills they need to become confident mathematicians.

declarative knowledge: facts, concepts, formulae

procedural knowledge: methods, procedures, algorithms

conditional knowledge: strategies formed from the combinations of facts and methods to reason and problem-solve

Concrete – Pictorial – Abstract (CPA)

Research shows that all children, when introduced to a new concept, should have the opportunity to build competency by following the CPA approach. This features throughout our scheme of learning.

Common Mistakes, Misconceptions & Areas Requiring Additional Support

Teachers plan for common mistakes, misconceptions and areas that may require additional support by making themselves familiar with the 'Things to look out for' section on the termly 'White Rose Schemes of Learning'.

Vocabulary

Understanding a wide range of mathematical vocabulary is essential to our scheme of work; consequently vocabulary is specifically taught through daily lessons and 'Possible Sentence Stems' are used to further support children's mathematical language and to develop their reasoning skills.

	Autumn term						Spring term						Summer term					
Nursery	Match & Sort	Measure & Pattern	1	2D Shapes	2	2D Shapes	3	Measure	4	Manipulate, Compose & Decompose	5	Explore Shapes	1, 2, 3	Patterns	Measure	1, 2, 3, 4, 5	Visualise, Build & Map	Make Connections 1, 2, 3, 4, 5
	<ul style="list-style-type: none"> Match objects Match objects & pictures Match shapes 	<ul style="list-style-type: none"> Compare size Identify patterns Explore simple patterns Use pattern language 	<ul style="list-style-type: none"> Find 1 Subitise 1 Explore 1 Show 1 Experiment with own marks & symbols 	<ul style="list-style-type: none"> Identify & name circles & triangles Select appropriate shapes for building Talk about shapes 	<ul style="list-style-type: none"> Find 2 Subitise 2 Explore 2 Show 2 Experiment with own marks & symbols 	<ul style="list-style-type: none"> Identify & recognise squares & rectangles Select appropriate shapes for building Talk about shapes 	<ul style="list-style-type: none"> Find 3 Subitise 3 Explore 3 Show 3 Experiment with own marks & symbols 	<ul style="list-style-type: none"> More than & fewer than Compare size Compare length 	<ul style="list-style-type: none"> Find 4 Make 4 Explore 4 Show 4 Experiment with own marks & symbols 	<ul style="list-style-type: none"> Select shapes for a purpose Manipulate shapes Compose shapes Copy 2D shape pictures 	<ul style="list-style-type: none"> Find 5 Make 5 Explore 5 Show 5 Experiment with own marks & symbols 	<ul style="list-style-type: none"> Identify & name circles, triangles, squares & rectangles Explore 3D shapes Build using 3D shapes Mark making 	<ul style="list-style-type: none"> Subitising 1, 2, 3 Match numerals & amounts up to 3 Explore 1, 2, 3 Show 1, 2, 3 	<ul style="list-style-type: none"> Extend ABAB patterns Create ABAB patterns Correct errors in patterns Begin to describe sequences 	<ul style="list-style-type: none"> Compare weight Compare capacity 	<ul style="list-style-type: none"> Subitise 1, 2, 3 Match numerals to amounts up to 5 Finger counting to 5 Show 1, 2, 3, 4, 5 Recite numbers past 5 	<ul style="list-style-type: none"> Explore position Describe a familiar route Use positional language Discuss routes & locations Begin to describe sequences of events 	<ul style="list-style-type: none"> Recite numbers past 5 Solve real world problems up to 5
Reception	Match, Sort & Compare	Measure & Pattern	1, 2, 3	Circles & Triangles	1, 2, 3, 4, 5	Shapes with 4 Sides	Alive in 5	Mass & Capacity	Growing 6, 7, 8	Length, Height & Time	Building 9 & 10	Explore 3D Shapes	20 & Beyond	How Many Now?	Manipulate, Compose & Decompose	Sharing & Grouping	Visualise, Build & Map	Make Connections
	<ul style="list-style-type: none"> Match objects Match objects & pictures Identify a set Sort objects to a type Explore sorting techniques Create sorting rules Compare amounts 	<ul style="list-style-type: none"> Compare size Compare mass Compare capacity Explore simple patterns Copy & continue simple patterns Create simple patterns 	<ul style="list-style-type: none"> Find 1, 2, 3 Subitise 1, 2 & 3 Rep 1, 2 & 3 1 more 1 less Composition of 1, 2 & 3 	<ul style="list-style-type: none"> Identify & name circles & triangles Compare circles & triangles Shapes in the env Describe position 	<ul style="list-style-type: none"> Find 4 & 5 Subitise 4 & 5 Represent 4 & 5 1 more 1 less Composition of 4 & 5 Composition of 1-5 	<ul style="list-style-type: none"> Identify & name shapes with 4 sides Combine shapes with 4 sides Shapes in the environment 	<ul style="list-style-type: none"> Intro 0 Find 0-5 Subitise 0-5 Rep 0-5 1 more 1 less Composition Concept subitising to 5 	<ul style="list-style-type: none"> Compare mass Find a balance Explore capacity Compare capacity 	<ul style="list-style-type: none"> Find 6, 7, 8 Rep 6, 7, 8 1 more 1 less Comp 6, 7, 8 Make pairs – odd & even Find doubles to 8 Make doubles to 8 Combine 2 groups Concept subitising 	<ul style="list-style-type: none"> Explore length Compare length Explore height Compare height Talk about time Order & sequence time 	<ul style="list-style-type: none"> Find 9 & 10 Compare numbers to 10 Rep 9 & 10 Concept subitising to 10 1 more 1 less Comp to 10 Bonds to 10 Make arrangements of 10 Bonds to 10 (3 parts) Find doubles to 10 Make doubles to 10 	<ul style="list-style-type: none"> Recognise & name 3D shapes Find 2D shapes within 3D shapes Use 3D shapes for tasks 3D shapes in the environment Identify more complex patterns Copy & continue patterns Patterns in the environment 	<ul style="list-style-type: none"> Build numbers beyond 10 (10-13) Cont patterns beyond 10 (10-13) Build numbers beyond 10 (14-20) Verbal counting beyond 20 Verbal counting patterns 	<ul style="list-style-type: none"> Add more How many did I add? Take away How many did I take away? 	<ul style="list-style-type: none"> Select shapes for a purpose Rotate shapes Manipulate shapes Explain shape arrangements Compose shapes Decompose shapes Copy 2D shape pictures Find 2D shapes within 3D shapes 	<ul style="list-style-type: none"> Explore sharing Sharing Explore grouping Grouping Even & odd sharing Play with and build doubles 	<ul style="list-style-type: none"> Identify units of repeating patterns Create own pattern rules Explore own pattern rules Replicate & build scenes & construction Visualise from different positions Describe positions Give instructions to build Explore mapping Rep maps with models Create own maps from familiar places & stories 	<ul style="list-style-type: none"> Deepen understand Patterns & relationships

Y 1	Number Place Value Numbers to 10	Number Add & Subt Numbers within 10	Geometry Shape	Number Consol	Number Place Value Numbers to 20	Number Add & Subt Numbers within 20	Number Place Value Numbers within 50	Measure Length & Height	Measure Mass & Vol	Measure Money	Measure Time	Number Mult & Div	Number Fractions	Geom Position & Direction	Number Place Value Numbers within 100	
Objectives	<ul style="list-style-type: none"> Sort objects Count objects Count objects from a larger group Represent objects Recognise numbers as words Count on from any number 1 more Count backwards within 10 1 less Compare groups by matching Fewer, more, same Less than, greater than, equal to Compare numbers Order objects & numbers 	<ul style="list-style-type: none"> Parts & wholes Part-whole model Write number sentences Fact families + facts Number bonds within 10 Systematic number bonds within 10 Number bonds to 10 Add together Add more Addition problems Find a part Subtraction - find a part Fact families – the 8 facts Take away / cross out Take away – how many left? Subtraction on a number line Add or subtract 1 or 2 	<ul style="list-style-type: none"> Recognise & name 3D shapes Recognise & name 2D shapes Sort 2D shapes Patterns with 2D & 3D shapes 	<p>Place value</p> <p>Add & subtract</p>	<ul style="list-style-type: none"> Count within 20 Understand 10 Understand 11, 12 & 13 Understand 14, 15 & 16 Understand 17, 18 & 19 Understand 20 1 more & 1 less Number line to 20 Estimate on a number line to 20 Compare numbers to 20 Order numbers to 20 	<ul style="list-style-type: none"> Add by counting on within 20 Add ones using number bonds Find & make number bonds to 20 Doubles Near doubles Subtract ones using number bonds Subtraction – counting back Subtraction – finding difference Related facts Missing number problems 	<ul style="list-style-type: none"> Count from 20 to 50 20, 30, 40 & 50 Count by making groups of 10 Groups of tens & ones Partition into tens & ones Number line to 50 Estimate on a number line to 50 1 more, 1 less Compare lengths & heights Measure length using objects Measure length in cms 	<ul style="list-style-type: none"> Compare lengths & heights Measure length using objects Measure length in cms 	<ul style="list-style-type: none"> Heavier & lighter Measure mass Compare mass Full & empty Compare volume Measure capacity Compare capacity 	<ul style="list-style-type: none"> Unitising Recog coins Recog notes Count in coins 	<ul style="list-style-type: none"> Before & after Days of the week Months of the year Hours, minutes & seconds Tell the time to the hour Tell the time to the half hour 	<ul style="list-style-type: none"> Count in 2s Count in 10s Count in 5s Recognise equal groups Add equal groups Make arrays Make doubles Make equal groups - grouping Make equal groups - sharing 	<ul style="list-style-type: none"> Recognise half of an object or shape Find half of an object or shape Recognise half of a quantity Find half of a quantity Recognise quarter of an object or shape Find a quarter of an object or a shape Recognise a quarter of a quantity Find a quarter of a quantity 	<ul style="list-style-type: none"> Describe turns Describe position – left & right Describe position – forwards & backwards Describe position – above & below Ordinal numbers 	<ul style="list-style-type: none"> Count from 50 to 100 Tens to 100 Partition into tens & ones Number line to 100 1 more, 1 less Compare numbers with same number of tens Compare any 2 numbers 	
Reasoning	<ul style="list-style-type: none"> Spot the mistake in number sequences True of false statements What comes next? Do, then explain 	<ul style="list-style-type: none"> Continue the pattern Missing numbers Working backwards What do you notice? Fact families What else do you know? Missing symbols Convince me Making an estimate Is it true that? 	<ul style="list-style-type: none"> What's the same, what's different? Visualising True or false? Other possibilities 		<ul style="list-style-type: none"> Spot the mistake in number sequences True of false statements What comes next? Do, then explain 	<ul style="list-style-type: none"> Cont the pattern Missing numbs Working bwards What do you notice? Fact families What else do you know? Missing symbols Convince me Making an est Is it true that? 	<ul style="list-style-type: none"> Spot the mistake in number sequences True of false statements What comes next? Do, then explain 	<ul style="list-style-type: none"> Top tips Application 	<ul style="list-style-type: none"> Top tips Application 	<ul style="list-style-type: none"> Possibilities 	<ul style="list-style-type: none"> Explain thinking 	<ul style="list-style-type: none"> Making links Spot the mistake 	<ul style="list-style-type: none"> What do you notice? True or false? 	<ul style="list-style-type: none"> Working backwards 	<ul style="list-style-type: none"> Spot the mistake in number sequences True of false statements What comes next? Do, then explain 	
Curriculum Links	<p>English</p> <p>The Gingerbread Man</p> <p>The Enormous Turnip</p> <p>Ten Little Dinosaurs by Mike Brownlow</p> <p>Spelling numbers</p> <p>Science</p> <p>Counting, sorting & finding specific numbers of living things</p> <p>Music</p> <p>Clapping songs</p>	<p>Science</p> <p>Counting & calculating with leaves and conkers</p> <p>Real Life Problem Solving</p>	<p>DT</p> <p>Constructing Windmills</p> <p>Making 2D & 3D shapes</p> <p>Computing</p> <p>Mouse Skills</p> <p>2D shape pictures</p> <p>Data Handling</p> <p>Pictograms of 2D shapes</p>	Real Life Problem Solving	Real Life Problem Solving	Real Life Problem Solving	Real Life Problem Solving	Science Seasons Measuring rainfall in cms	DT Cooking Measuring liquid	PSHE Economic Well-Being Money	Science Seasons Night / day, months	Real Life Problem Solving	DT Cooking Amounts of ingredients	Geography Mapping & Fieldwork Create maps to show routes	Computing Bee-Bots Giving directional instructions	Coding Moving objects

Y 2	Number Place Value Numbers to 100	Number Add & Subt Numbers within 100	Number Mult & Div	Number Mult & Div	Number Fractions	Geometry Shape	Measure Length & Height	Number Money	Statistics	Measure Mass, Cap & Temp	Measure Time	Geometry Position & Direction	Number Consolidate
Objectives	<ul style="list-style-type: none"> Numbers to 20 Count objects to 100 by making 10s Recognise tens & ones Use a place value chart Partition numbers to 100 Write numbers to 100 in words Flexibly partition numbers to 100 Write numbers to 100 in expanded form 10s on a number line to 100 10s & 1s on a number line to 100 Estimate numbers on a number line Compare objects Compare numbers Order objects & numbers Count in 2s, 5s and 10s Count in 3s 	<ul style="list-style-type: none"> Bonds to 10 Fact families – addition & subtraction bonds within 20 Related facts Bonds to 100 (tens) Add & subtract 1s Add by making 10 Add three 1-digit numbers Add to the next 10 Add across a 10 Subtract across a 10 Subtract from a 10 Subtract a 1-digit from a 2-digit number 10 more, 10 less Add & subtract 10s Add two 2-digit numbers (not across a 10) Add two 2-digit numbers (across a 10) Subtract two 2-digit numbers (not across a 10) Subtract two 2-digit numbers (across a 10) Mixed addition & subtraction Compare number sentences Missing number problems 	<ul style="list-style-type: none"> Recognise equal groups Make equal groups Add equal groups Introduce multiplication symbol Multiplication sentences Use arrays Make equal groups – grouping Make equal groups – sharing 	<ul style="list-style-type: none"> 2x tables Divide by 2 Doubling & halving Odd & even numbers 10x tables Divide by 10 5x tables Divide by 5 5x & 10x tables 	<ul style="list-style-type: none"> Intro to parts & whole Equal & unequal parts Recognise a half Find a half Recognise a quarter Find a quarter Recognise a third Find a third Find the whole Unit fractions Non-unit fractions Recognise the equivalence of a half & 2 quarters Recognise three quarters Count in fractions up to a whole 	<ul style="list-style-type: none"> Recognise 2D & 3D shapes Count sides on 2D shapes Count vertices on 2D shapes Draw 2D shapes Lines of symmetry on shapes Use lines of symmetry to complete shapes Sort 2D shapes Count faces on 3D shapes Count edges on 3D shapes Count vertices on 3D shapes Sort 3D shapes Make patterns with 2D & 3D shapes 	<ul style="list-style-type: none"> Measure in cms Measure in m Compare lengths & heights Order lengths & heights Four operations with lengths & heights 	<ul style="list-style-type: none"> Count money – pence Count money – pounds Count money – pounds & pence Choose notes & coins Make the same amount Compare amounts of money Calculate with money Make a pound Find change 2-step problems 	<ul style="list-style-type: none"> Make tally charts Tables Block diagrams Draw pictograms (1-1) Interpret pictograms (1-1) Draw pictograms (2, 5 & 10) Interpret pictograms (2, 5 & 10) 	<ul style="list-style-type: none"> Compare mass Measure in grams Measure in kg Four operations with mass Compare volume & capacity Measure in ml Measure in l Four operations with volume & capacity Temperature 	<ul style="list-style-type: none"> O'clock & half past Quarter past & quarter to Tell the time past the hour Tell the time to the hour Tell the time to 5 minutes Minutes in an hour Hours in a day 	<ul style="list-style-type: none"> Language of position Describe movement Describe turns Describe movement & turns Shape patterns with turns 	<ul style="list-style-type: none"> Add & subtract Mult & div
Reasoning	<ul style="list-style-type: none"> Spot the mistake in number sequences True or false? What comes next? Do, then explain Make up an example 	<ul style="list-style-type: none"> Continue the pattern Missing numbers True or false? Hard & easy questions Fact families What else do you know? Missing symbols Convince me Making an estimate Always, sometimes, never 	<ul style="list-style-type: none"> Missing numbers Making links Prove it True or false? Use the inverse 	<ul style="list-style-type: none"> Missing numbers Making links Prove it True or false? Use the inverse 	<ul style="list-style-type: none"> Spot the mistake What comes next? What do you notice? True or false? Odd one out 	<ul style="list-style-type: none"> Whats the same, what's different? Always, sometimes, never Other possibilities 	<ul style="list-style-type: none"> Top tips Position the symbols Application 	<ul style="list-style-type: none"> Possibilities 	<ul style="list-style-type: none"> True or false? Convince me What's the same, what's different? Create a question 	<ul style="list-style-type: none"> Top tips Position the symbols Application 	<ul style="list-style-type: none"> Undoing Explain thinking Working backwards The answer is... What do you notice? 	<ul style="list-style-type: none"> Working backwards What comes next? Explain why 	
Curriculum Links	Real Life Problem Solving	Real Life Problem Solving	Real Life Problem Solving	DT Moving Monsters Halving	DT Moving Monsters Halving	Art Printmaking Symmetry Painting Identifying shapes & lines DT Baby Bear's Chair Strong 3D shapes	Science Plants Measure heights of plants DT Moving Monsters Measure pivots on levers	PSHE Economic Well-Being	Computing Data Handling Pictograms & tally charts	Science Plants Measure volume of water given	PE Run, Jump, Throw Timing using minutes & seconds	Geography Fieldwork & Map Skills Position & movement language	Real Life Problem Solving

Y 3	Number Place Value Numbers to 1000	Number Add & Subt Numbers within 1000	Number Mult & Div	Number Mult & Div	Measure Length & Perimeter	Number Fractions	Measure Mass & Capacity	Number Fractions	Measure Money	Measure Time	Geometry Shape	Statistics
Objectives	<ul style="list-style-type: none"> Represent numbers to 100 Partition numbers to 100 Number line to 100 Hundreds Represent numbers to 1000 Partition numbers to 1000 Flexible partitioning of numbers to 1000 Hundreds, tens & ones Find 1, 10 or 100 more or less Number line to 1000 Estimate on a number line to 1000 Compare numbers to 1000 Order numbers to 1000 Count in 50s 	<ul style="list-style-type: none"> Apply number bonds within 10 Add & subtract 1s Add & subtract 10s Add & subtract 100s Spot patterns Add ones across a 10 Add 10s across a 100 Subtract 1s across a 10 Subtract 10s across a 100 Make connections Add two numbers (no exchange) Subtract two numbers (no exchange) Add two numbers (across a 10) Add two numbers (across a 100) Subtract two numbers (across a 10) Subtract two numbers (across a 100) Add 2-digit & 3-digit numbers Subtract 2-digit from 3-digit numbers Complements to 100 Estimate answers Inverse operations Make decisions 	<ul style="list-style-type: none"> Multiplication – equal groups Use arrays Multiples of 2 Multiples of 5 & 10 Sharing & grouping Multiply by 3 Divide by 3 3x tables Multiply by 4 Divide by 4 4x tables Multiply by 8 Divide by 8 8x tables 2, 4 & 8x tables 	<ul style="list-style-type: none"> Multiples of 10 Related calculations Reasoning about multiplication Multiply 2-digit by 1-digit number – no exchange Multiply 2-digit by 1-digit number – with exchange Link multiplication & division Divide a 2-digit by 1-digit number – no exchange Divide a 2-digit by 1-digit number – flexible partitioning Divide a 2-digit by 1-digit number – with remainders Scaling How many ways? 	<ul style="list-style-type: none"> Measure in m & cm Measure in mm Measure in cm & mm M, cm & mm Equivalent lengths (m & cm) Equivalent lengths (cm & mm) Compare lengths Add lengths Subtract lengths What is perimeter? Measure perimeter Calculate perimeter 	<ul style="list-style-type: none"> Understand denominators of unit fractions Compare & order unit fractions Understand numerators of unit fractions Understand the whole Compare & order non-unit fractions Fractions & scales Fractions on a number line Count in fractions on a number line Equivalent fractions on a number line Equivalent fractions as bar models 	<ul style="list-style-type: none"> Use scales Measure mass in grams Measure mass in kg & g Equivalent masses (kg & g) Compare mass Add & subtract mass Measure capacity & volume in ml Measure capacity & volume in litres & ml Equivalent capacities & volumes (l & ml) Compare capacity & volume Add & subtract capacity & volume 	<ul style="list-style-type: none"> Add fractions Subtract fractions Partition the whole Unit fractions of a set of objects Non-unit fractions of a set of objects Reasoning with fractions of an amount 	<ul style="list-style-type: none"> Pounds & pence Convert pounds & pence Add money Subtract money Find change 	<ul style="list-style-type: none"> Roman numerals to 12 Tell the time to 5 minutes Tell the time to the minute Read time on a digital clock Use am & pm Years, months & days Days & hours Hours & minutes – use start & end times Hours & minutes – use durations Minutes & seconds Units of time Solve problems with time 	<ul style="list-style-type: none"> Turns & angles Right angles Compare angles Measure & draw accurately Horizontal & vertical Parallel & perpendicular Recognise & describe 2D shapes Draw polygons Recognise & describe 3D shapes Make 3D shapes 	<ul style="list-style-type: none"> Interpret pictograms Draw pictograms Interpret bar charts Draw bar charts Collect & represent data Two-way tables
Reasoning	<ul style="list-style-type: none"> Spot the mistake in number sequences True or false? What comes next? Do, then explain Make up an example 	<ul style="list-style-type: none"> Continue the pattern Missing numbers True or false? Hard & easy questions Fact families What else do you know? Missing symbols Convince me Making an estimate Always, sometimes, never 	<ul style="list-style-type: none"> Missing numbers Making links Use a fact Prove it How close can you get? True or false? Use the inverse Size of an answer 	<ul style="list-style-type: none"> Missing numbers Making links Use a fact Prove it How close can you get? True or false? Use the inverse Size of an answer 	<ul style="list-style-type: none"> Top tips Position the symbols Testing conditions 	<ul style="list-style-type: none"> Spot the mistake What comes next? What do you notice? True or false? Odd one out 	<ul style="list-style-type: none"> Top tips Position the symbols Write more statements 	<ul style="list-style-type: none"> Spot the mistake What comes next? What do you notice? True or false? Odd one out 	<ul style="list-style-type: none"> Possibilities 	<ul style="list-style-type: none"> Undoing Explain thinking Working backwards The answer is... What do you notice? 	<ul style="list-style-type: none"> What's the same, what's different? Visualising Other possibilities Always, sometimes, never Convince me 	<ul style="list-style-type: none"> True or false? Convince me What's the same, what's different? Create a question
Curriculum Links	<p>English Biography Beatrix Potter – Key dates / timelines</p> <p>History Stone, Bronze & Iron Age Link numbers to years</p>	<p>History Stone, Bronze & Iron Age Differences between key dates</p>	<p>DT Cooking & Nutrition Multiplying / dividing ingredients & equipment amongst groups and individuals</p> <p>Pre-teaching of scaling up and down for recipes</p>	<p>Real Life Problem Solving</p>	<p>DT Mechanical Systems Measure equipment in cms and mms</p>	<p>Real- Life Problem Solving</p>	<p>Real-Life Problem Solving</p>	<p>Real-Life Problem Solving</p>	<p>PSHE Economic Well-Being Saving & paying using pounds and pence</p>	<p>Real-Life Problem Solving Solving Science Plants Measuring durations of time</p>	<p>Geography Map & Fieldwork Directions DT Structures Recognising & using 2D & 3D shapes</p>	<p>Science Plants Represent investigation data through bar charts</p>

Y 4	Number Place Value Numbers to 10,000	Number Add & Subt	Number Multi & Div	Number Fractions	Measure Length & Perimeter	Measure Area	Number Mult & Div	Number Fractions & Decimals	Number Decimals	Measure Money	Measure Time	Geom Shape	Statistics	Geom Pos & Dir
Objectives	<ul style="list-style-type: none"> Represent number to 1000 Partition numbers to 1000 Number line to 1000 Thousands Represent numbers to 10,000 Partition numbers to 10,000 Flexible partitioning of numbers to 10,000 Find 1, 10, 100, 1000 more or less Number line to 10,000 Estimate on a number line to 10,000 Compare numbers to 10,000 Order numbers to 10,000 Roman numerals Round to the nearest 10 Round to the nearest 100 Round to the nearest 1000 Round to the nearest 10, 100 or 1000 	<ul style="list-style-type: none"> Add & subtract 1s, 10s, 100s and 1000s Add up to two 4-digit numbers – no exchange Add two 4-digit numbers – one exchange Add two 4-digit numbers – more than one exchange Subtract two 4-digit numbers – no exchange Subtract 4-digit numbers – one exchange Subtract 4-digit numbers – more than one exchange Efficient subtraction Estimate answers Checking strategies 	<ul style="list-style-type: none"> Multiples of 3 Multiply & divide by 6 6x tables & division facts Multiply & divide by 9 9x tables & division facts 3, 6 & 9x tables Multiply & divide by 7 7x tables & division facts 11x tables & division facts 12x tables & division facts Multiply by 1 & 0 Divide a number by 1 & itself Multiply 3 numbers 	<ul style="list-style-type: none"> Understand the whole Count beyond 1 Partition a mixed number Number lines with mixed numbers Compare & order mixed numbers Understand improper fractions Convert mixed numbers to improper fractions Convert improper fractions to mixed numbers Equivalent fractions on a number line Equivalent fraction families Add two or more fractions Add fractions & mixed numbers Subtract two fractions Subtract from whole amounts Subtract from mixed numbers 	<ul style="list-style-type: none"> Measure in km & m Equivalent lengths (km & m) Perimeter on a grid Perimeter of a rectangle Perimeter of rectilinear shapes Find missing lengths in rectilinear shapes Calculate perimeter of rectilinear shapes Perimeter of regular polygons Perimeter of polygons 	<ul style="list-style-type: none"> What is area? Count squares Make shapes Compare areas 	<ul style="list-style-type: none"> Factor pairs Use factor pairs Multiply by 10 Multiply by 100 Divide by 10 Divide by 100 Related facts – multiplication & division Informal written methods for multiplication Multiply 2-digit by 1-digit number Multiply 3-digit by 1-digit number Divide 2-digit by 1-digit number Divide 3-digit by 1-digit number Correspondence problems Efficient multiplication 	<ul style="list-style-type: none"> Tenths as fractions Tenths as decimals Tenths on a place value chart Tenths on a number line Divide a 1-digit number by 10 Divide a 2-digit number by 10 Hundredths as decimals Hundredths on a place value chart Divide a 1 or 2-digit number by 100 	<ul style="list-style-type: none"> Make a whole with tenths Make a whole with hundredths Partition decimals Flexibly partition decimals Compare decimals Order decimals Round to the nearest whole number Halves & quarters as decimals 	<ul style="list-style-type: none"> Write money using decimals Convert between pounds & pence Compare amounts of money Estimate with money Calculate with money Solve problems with money 	<ul style="list-style-type: none"> Years, months, weeks & days Hours, minutes & seconds Convert between analogue & digital times Convert to the 24-hour clock Convert from the 24-hour clock 	<ul style="list-style-type: none"> Know angles as turns Identify angles Compare and order angles Triangles Quadrilaterals Polygons Lines of symmetry Complete a symmetric figure 	<ul style="list-style-type: none"> Interpret charts Comparison, sum & difference Interpret line graphs Draw line graphs 	<ul style="list-style-type: none"> Describe position using coordinates Plot coordinates Draw 2D shapes on a grid Translate on a grid Describe translation on a grid
Reasoning	<ul style="list-style-type: none"> Spot the mistake in number sequences True or false? What comes next? Do, then explain Make up an example Possible answers What do you notice? 	<ul style="list-style-type: none"> Continue the pattern Missing numbers True or false? Hard & easy questions Fact families What else do you know? Missing symbols Convince me Making an estimate Always, sometimes, never 	<ul style="list-style-type: none"> Missing numbers Making links Use a fact Prove it How close can you get? Always, sometimes, never Use the inverse Size of an answer 	<ul style="list-style-type: none"> Spot the mistake What comes next? What do you notice? True or false? Odd one out Complete the pattern Ordering Continuing the pattern 	<ul style="list-style-type: none"> Top tips Position the symbols Write more statements The answer is... 	<ul style="list-style-type: none"> Testing conditions Always, sometimes, never 	<ul style="list-style-type: none"> Missing numbers Making links Use a fact Prove it How close can you get? Always, sometimes, never Use the inverse Size of an answer 	<ul style="list-style-type: none"> Spot the mistake What comes next? What do you notice? True or false? Missing symbol Do, then explain Top tips Complete the pattern Ordering Undoing Another & another Undoing 	<ul style="list-style-type: none"> Possibilities 	<ul style="list-style-type: none"> Undoing Explain thinking Working backwards What do you notice? 	<ul style="list-style-type: none"> What's the same, what's different? Visualising Other possibilities Always, sometimes, never Convince me 	<ul style="list-style-type: none"> True or false? Convince me What's the same, what's different? Create a question 	<ul style="list-style-type: none"> Working backwards 	
Curriculum Links	History Vikings, Anglo-Saxons & Egyptians Timelines RE Buddhism Key dates	Computing Computational Thinking Problem solving using abstraction	Real Life Problem Solving	Real Life Problem Solving	DT Pavillions Measure using cm & mm to fit within given perimeters	Real Life Problem Solving	Real Life Problem Solving	Real Life Problem Solving	Real Life Problem Solving	DT Food & Nutrition Budgeting & profit / loss PSHE Economic Well-Being Costs & Savings	Science States of Matter Times taken for materials to melt	PE Orienteering Angles as turns clockwise / anti-clockwise	Science Sound Noise levels in school Computing Spreadsheet Creating graphs from data	Geography Longitude & Latitude Coordinates & map reading

Y5	Number Place Value	Number Add & Subt	Number Mult & Div	Number Fractions	Number Mult & Div	Number Fractions	Number Decimals & Percentage	Measure Perimeter & Area	Statistics	Geom Shape	Geom Position & Direction	Number Decimals	Number Neg Number	Measure Convert Units	Measure Volume
Objectives	<ul style="list-style-type: none"> Roman numerals to 1000 Numbers to 10,000 Numbers to 100,000 Numbers to 1,000,000 Read & write numbers to 1,000,000 Powers of 10 10 / 100 / 1000 / 10,000 / 100,000 more or less Partition numbers to 1,000,000 Number line to 1,000,000 Compare & order numbers to 100,000 Compare & order numbers to 1,000,000 Round to the nearest 10, 100 or 1000 Round within 100,000 Round within 1,000,000 	<ul style="list-style-type: none"> Mental strategies Add whole numbers with more than four digits Subtract whole numbers with more than four digits Round to check answers Inverse operations Multi-step addition & subtraction problems Compare calculations Find missing numbers 	<ul style="list-style-type: none"> Multiples Common multiples Factors Common factors Prime numbers Square numbers Cube numbers Multiply by 10, 100 & 1000 Divide by 10, 100 & 1000 Multiples of 10, 100 & 1000 	<ul style="list-style-type: none"> Find fractions equivalent to a unit fraction Find fractions equivalent to a non-unit fraction Recognise equivalent fractions Convert improper fractions to mixed numbers Convert mixed numbers to improper fractions Compare fractions less than 1 Order fractions less than 1 Compare & order fractions greater than 1 Add & subtract fractions with the same denominator Add fractions within 1 Add fractions with total greater than 1 Add to a mixed number Add two mixed numbers Subtract fractions Subtract from a mixed number Subtract from a mixed number – breaking the whole Subtract two mixed numbers 	<ul style="list-style-type: none"> Multiply up to a 4-digit by 1-digit number Multiply 2-digit by 2-digit (area model) number Multiply 2-digit by 2-digit number Multiply 3-digit by 2-digit number Multiply 4-digit by 2-digit number Solve problems with mult Short division Divide 4-digit by 1-digit number Divide with remainders Efficient division Solve problems with mult and division 	<ul style="list-style-type: none"> Multiply a unit fraction by an integer Multiply a non-unit fraction by an integer Multiply a mixed number by an integer Calculate a fraction of a quantity Fraction of an amount Find the whole Use fractions as operators 	<ul style="list-style-type: none"> Decimals up to 2 decimal places Equivalent fractions & decimals (tenths) Equivalent fractions & decimals Thousandths as fractions Thousandths as decimals Thousandths on a place value chart Order & compare decimals (same number of decimal places) Order & compare any decimals with up to 3dp Round to the nearest whole number Round to 1dp Understand percentages Percentages as fractions Percentages as decimals Equivalent fractions, decimals & percentages 	<ul style="list-style-type: none"> Perimeter of rectangles Perimeter of rectilinear shapes Perimeter of polygons Area of rectangles Area of compound shapes Estimate area 	<ul style="list-style-type: none"> Draw line graphs Read & interpret line graphs Read & interpret tables Two-way tables Read & interpret timetables 	<ul style="list-style-type: none"> Understand & use degrees Classify angles Estimate angles Measure angles up to 180 Draw lines & angles accurately Calculate angles around a point Calculate angles on a straight line Lengths & angles in shapes Regular & irregular polygons 3D shapes 	<ul style="list-style-type: none"> Read & plot coordinates Problem solving with coordinates Translation Translation with coordinates Lines of symmetry Reflection in horizontal & vertical lines 	<ul style="list-style-type: none"> Use known facts to add & subtract decimals within 1 Complements to 1 Add & subtract decimals across 1 Add decimals with the same number of dp Subtract decimals with different numbers of dp Efficient strategies for adding & subtracting decimals Decimal sequences Multiply by 10, 100 & 1000 Divide by 10, 100 & 1000 Multiply & divide decimals – missing values 	<ul style="list-style-type: none"> Understand and negative numbers Count through zero in 1s Count through zero in multiples Compare & order negative numbers Find the difference 	<ul style="list-style-type: none"> Kilograms & kilometres Millimetres & millilitres Convert units of length Convert between metric & imperial units Convert units of time Calculate with timetables 	<ul style="list-style-type: none"> Cubic centimetres Compare volume Estimate volume Estimate capacity
Reasoning	<ul style="list-style-type: none"> Spot the mistake in number sequences True or false? What comes next? Do, then explain Make up an example Possible answers What do you notice? 	<ul style="list-style-type: none"> Continue the pattern Missing numbers True or false? Hard & easy questions Fact families What else do you know? Missing symbols Convince me Making an estimate Always, sometimes, never 	<ul style="list-style-type: none"> Missing numbers Making links Use a fact Prove it Always, sometimes, never Use the inverse Size of an answer 	<ul style="list-style-type: none"> Spot the mistake What comes next? What do you notice? True or false? Missing symbol Top tips Odd one out What do you notice? Ordering Continue the pattern 	<ul style="list-style-type: none"> Missing numbers Making links Use a fact Prove it Always, sometimes, never Use the inverse Size of an answer 	<ul style="list-style-type: none"> Spot the mistake What comes next? What do you notice? True or false? Missing symbol Top tips Odd one out What do you notice? Another & another Ordering Undoing 	<ul style="list-style-type: none"> Spot the mistake What comes next? What do you notice? True or false? Missing symbol Do, then explain Top tips Odd one out What do you notice? Another & another Ordering Undoing 	<ul style="list-style-type: none"> Top tips Other possibilities Testing conditions Always, sometimes, never 	<ul style="list-style-type: none"> True or false? Convince me 	<ul style="list-style-type: none"> What's the same, what's different? Visualising Other possibilities Always, sometimes, never Other possibility 	<ul style="list-style-type: none"> Working backwards 	<ul style="list-style-type: none"> Spot the mistake What comes next? True or false? Missing symbol Do, then explain Top tips Complete the pattern Another & another Ordering Undoing 	<ul style="list-style-type: none"> Spot the mistake True or false? What comes next? Do, then explain 	<ul style="list-style-type: none"> Undoing Working backwards The answer is What do you notice? 	<ul style="list-style-type: none"> Write more statements
Curriculum Links	<p>History Victorians Roman numerals The Mayans Number systems / base 20 The Mayans, Ancient Greeks & Victorians Timeline Science Animals Inc Humans Rounding to 10 Geography Locational Knowledge Populations</p>	<p>Real Life Problem Solving</p>	<p>Real Life Problem Solving</p>	<p>Science Earth & Space Phases of the moon Real Life Problem Solving</p>	<p>Real Life Problem Solving</p>	<p>Real Life Problem Solving</p>	<p>Science Earth & Space Planet data facts</p>	<p>Real Life Problem Solving</p>	<p>Science Living Things & Their Habitats Two-way tables Animals Inc Humans Line graph – comparing gestation</p>	<p>Science Forces Gears - clockwise & anti-clockwise Geography Locational Knowledge Latitude & longitude degrees DT Structures Cutting at 45 & 90 degree angles</p>	<p>Geography 4 & 6 Figure Grid References Locate places using grid references</p>	<p>Real Life Problem Solving</p>	<p>Real Life Problem Solving</p>	<p>DT Structures Weight capacities of bridges</p>	<p>Real Life Problem Solving</p>

Y 6	Number Place Value Numbers to 10,000,000	Number Add, Subtract, Mult & Div	Number Fractions	Number Fractions, Decimals & Percentages	Number Ratio	Number Convert Units	Number Consol	Number Algebra	Measure Area, Perim & Volume	Statistics	Geometry Shape	Geom Position & Direction	Number Consolid	Number Real Life Skills	Number Algebra
Objectives	<ul style="list-style-type: none"> Numbers to 1,000,000 Numbers to 10,000,000 Read & write numbers to 10,000,000 Powers of 10 Number line to 10,000,000 Compare & order any integers Place value within 1 Place value – integers & decimals Round any integer Round decimals Negative numbers 	<ul style="list-style-type: none"> Add & subtract integers Common factors Common multiples Rules of divisibility Primes to 100 Square & cube numbers Multiply up to a 4-digit by a 2-digit number Solve problems with multiplication Short division Division using factors Intro to long division Long division with remainders Solve problems with division Solve multi-step problems Order of operations Mental calculations & estimation Reason from known facts Add & subtract decimals Multiply by 10, 100 & 1000 Divide by 10, 100 & 1000 Multiply decimals by integers Divide decimals by integers Multiply & divide decimals in context 	<ul style="list-style-type: none"> Equivalent fractions and simplifying Equivalent fractions on a number line Compare & order fractions Add & subtract simple fractions Add & subtract any two fractions Add mixed numbers Subtract mixed numbers Multi-step problems Multiply fractions by integers Multiply fractions by fractions Divide a fraction by an integer Mixed questions with fractions Fraction of an amount Fraction of an amount – find the whole 	<ul style="list-style-type: none"> Decimal & fraction equivalents Fractions as division Understand percentages Fractions to percentages Equivalent fractions, decimals & percentages Order fractions, decimals & percentages Percentage of an amount – one step Percentage of an amount – multi-step Percentages – missing values 	<ul style="list-style-type: none"> Add or multiply? Use ratio language Intro to the ratio symbol Ratio & fractions Scale drawing Use scale factors Similar shapes Ratio problems Proportion problems Recipes 	<ul style="list-style-type: none"> Metric measures Convert metric measures Calculate with metric measures Miles & kilometres Imperial measures 	<p>Fractions</p> <p>Decimals</p> <p>Percentages</p> <p>Ratio & proportion</p>	<ul style="list-style-type: none"> 1-step function machines 2-step function machines Form expressions Substitution Formulae Form equation Solve 1-step equations Solve 2-step equations Find pairs of values Solve problems with two unknowns 	<p>Shapes – same area</p> <ul style="list-style-type: none"> Area & perimeter Area of a triangle – counting squares Area of a right-angled triangle Area of any triangle Area of a parallelogram Volume - counting cubes Volume of a cuboid 	<ul style="list-style-type: none"> Line graphs Dual bar charts Read & interpret pie charts Pie charts with percentages Draw pie charts The mean 	<ul style="list-style-type: none"> Measure & classify angles Calculate angles Vertically opposite angles Angles in a triangle Angles in a triangle – special cases Angles in a triangle – missing angles Angles in a quadrilateral Angles in polygons Circles Draw shapes accurately Nets of 3D shapes 	<ul style="list-style-type: none"> The first quadrant Read & plot points in four quadrants Solve problems with coordinates Translations Reflections 	<p>Consolidate all aspects of number:</p> <p>Place value</p> <p>Calculation</p> <p>Fractions, decimals & percentage</p> <p>Ratio & proportion</p> <p>Conversions</p>	<p>Application of skills to real life problem solving</p>	<p>Algebra in prep for KS3</p>
Year 6 Reasoning	<ul style="list-style-type: none"> Spot the mistake in number sequences True or false? Do, then explain Make up an example Possible answers What do you notice? 	<ul style="list-style-type: none"> Continue the pattern Missing numbers Making links True or false? Hard & easy questions Fact families What else do you know? Missing symbols Convince me Making an estimate Always, sometimes, never 	<ul style="list-style-type: none"> Spot the mistake True or false? What do you notice? Do, then explain Another & another Odd one out Ordering Undoing Continue the pattern 	<ul style="list-style-type: none"> Spot the mistake True or false? What do you notice? Do, then explain Another & another Odd one out Ordering Undoing Continue the pattern 	<ul style="list-style-type: none"> What else do you know? Do, then explain Undoing Unpicking 	<ul style="list-style-type: none"> Top tips Write more statements What do you notice? 	<ul style="list-style-type: none"> Spot the mistake True or false? What do you notice? Do, then explain Another & another Odd one out Ordering Undoing Continue the pattern 	<ul style="list-style-type: none"> Connected calculations Undoing Generalising 	<ul style="list-style-type: none"> Other possibilities Top tips Testing conditions Always, sometimes, never The answer is... Visualising 	<ul style="list-style-type: none"> True or false? Convince me What's the same, what's different? Create a question Missing information 	<ul style="list-style-type: none"> What's the same, what's different? Other possibilities Always, sometimes, never Convince me 	<ul style="list-style-type: none"> Working backwards 	<ul style="list-style-type: none"> Spot the mistake True or false? What do you notice? Do, then explain Another & another Odd one out Ordering Undoing Continue the pattern 	<ul style="list-style-type: none"> Continue the pattern Missing numbers Making links True or false? Hard & easy questions Fact families What else do you know? Convince me Making an estimate 	<ul style="list-style-type: none"> Connected calculations Undoing Generalising
Curriculum Links	History Monarchs, Battle of Britain, Windrush Timelines	Real Life Problem Solving	Real Life Problem Solving	Science Animals Inc Humans Blood components	DT Cooking Proportion - adapting recipes for set numbers of people	DT Automata Toys Measuring materials in cm and mm	Real Life Problem Solving	Real Life Problem Solving	Real Life Problem Solving	Science – Animals Inc Humans Blood components through pie chart Investigation results	Science – Light Measuring angles of incidence & reflection Computing Intro to Python Measuring angles for turns	Geography – Maps & Orienteeering Coordinates	Real Life Problem Solving	Real Life Problem Solving	Real Life Problem Solving