



*“Pure mathematics is, in its way, the poetry of logical ideas.”*  
- Albert Einstein

Week 1-3: Geometry – Shape  
Week 4: Geometry – Position and Direction

Revision Areas: All KS2 content.

Week 6-12: Themed mathematical investigations – preparation for KS3.

Week 1-2: Number - Ratio  
Week 3-4: Number – Algebra  
Week 5-6: Decimals  
Week 7-8: Fractions, decimals and percentages.  
Week 9-10: Measurement – Area, perimeter and volume.  
Week 11-12: Statistics

Revision Areas: Four Operations/FDP

Week 1-2: Number and Place Value  
Week 3-7: Number - Four Operations  
Week 8-9: Fractions A  
Week 10-11: Fractions B  
Week 12: Measurement – Converting Units

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Week 1-3: Geometry – Shape  
Week 4-5: Geometry – Position and Direction  
Week 6-8: Decimals  
Week 9: Number – Negative Numbers  
Week 10-11: Measurement – Converting Units  
Week 12: Measurement - Volume

Y6 ADDITION	Y6 SUBTRACTION	Y6 MULTIPLICATION	Y6 DIVISION	Y6 CALCULATING - FRACTIONS & DECIMALS
<ul style="list-style-type: none"> <li>Column addition: range of large numbers/decimals</li> </ul>	<ul style="list-style-type: none"> <li>Column method with regrouping: range of large numbers/decimals</li> </ul>	<ul style="list-style-type: none"> <li>Column multiplication</li> </ul>	<ul style="list-style-type: none"> <li>Short division</li> <li>Long division (up to 4 digits by 2 digit inc. remainders)</li> </ul>	<ul style="list-style-type: none"> <li>Addition &amp; subtraction of fractions with different denominators and mixed numbers</li> <li>Multiplication of pairs of proper fractions -answer in its simplest form</li> <li>Multiplication and division of numbers by 10, 100 and 1000 -answers up to 3dp</li> <li>'Flip and kiss' to divide fractions by whole numbers</li> <li>Short division method with decimal numbers</li> </ul>
<b>Y6 VOCABULARY</b>				
Numbers to ten million, order of operations, common multiples, four quadrants (coordinates), vertically opposite, circumference, radius, diameter, degree of accuracy, simplify, simplest form, linear number sequence, substitute, variables, symbol, known values, mean, pie chart, construct, reflection, translation, express, relative size, formulae, algebra, generalisation, average				

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Week 1-3: Number and Place Value  
Week 4-5: Addition and Subtraction  
Week 6-8: Multiplication and Division A  
Week 9-12: Fractions A

Week 1-3: Multiplication and Division B  
Week 4-5: Fractions B  
Week 6-8: Decimals and Percentages  
Week 9-10: Measurement – Perimeter and Area  
Week 11-12: Statistics

Week 1-2: Decimals B  
Week 3-4: Measurement – Money  
Week 5-6: Measurement – Time  
Week 7: Assessment and Consolidation  
Week 8-9: Geometry – Shape  
Week 10: Statistics  
Week 11-12: Geometry – Position and Direction

Y5 ADDITION	Y5 SUBTRACTION	Y5 MULTIPLICATION	Y5 DIVISION	Y5 CALCULATING - FRACTIONS
Place value counters leading to column addition: THTO.TH	Column method with regrouping: THTO.TH	Column multiplication	<ul style="list-style-type: none"> <li>Short division (up to 4 digits by 1 digit inc. remainders)</li> </ul>	<ul style="list-style-type: none"> <li>Part whole models lead to addition &amp; subtraction of fractions with the same denominator &amp; multiples of that number</li> <li>Bar models lead to converting mixed numbers to improper fractions</li> <li>Repeated addition of fractions, leading to multiplication of proper fractions and mixed numbers by whole numbers</li> </ul>
<b>Y5 VOCABULARY</b>				
Powers of 10, factor pairs, composite numbers, prime number, prime factors, square number, cubed number, volume, imperial units, metric units, reflex angle, dimensions, regular and irregular polygons, proper fractions, improper fractions, mixed numbers, percentage, ratio, proportion, roman numerals (to M), common factors, decimal notation, deduce, sum, interpret				

Week 1-3: Multiplication and Division B  
Week 4-5: Measurement – Money  
Week 6-9: Fractions  
Week 10-12: Decimals A

Week 1-4: Number and Place Value  
Week 5-7: Addition and Subtraction  
Week 8: Measurement – Area  
Week 9-11: Multiplication and Division A  
Week 12: Assessment and Consolidation

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Week 1-2: Fractions B  
Week 3-4: Measurement – Money  
Week 5-7: Measurement - Time  
Week 8-9: Geometry – Shape  
Week 10-11: Statistics  
Week 12: Assessment and Consolidation

Y4 ADDITION	Y4 SUBTRACTION	Y4 MULTIPLICATION	Y4 DIVISION	Y4 CALCULATING - FRACTIONS
Place value counters leading to column addition: THTO	Column method with regrouping: THTO	Column multiplication introduced with place value counters	<ul style="list-style-type: none"> <li>Division with a remainder</li> <li>Short division (up to 3 digits by 1 digit)</li> </ul>	<ul style="list-style-type: none"> <li>Part whole models leading to addition and subtraction of numerators beyond one whole with the same denominator</li> </ul>
<b>Y4 VOCABULARY</b>				
Tenths, hundredths, decimal place, decimal point, round (to nearest), thousand more/less, negative integers, count through zero, roman numerals (I to C), inverse, derive, convert, coordinates, translation, quadrant, x-axis, y-axis, area, types of quadrilaterals, types of triangles, right angle, acute, obtuse, equivalent decimals and fractions, continuous data, discrete data, line graph, time graph, rectilinear, estimate, polygon				

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3

Week 1-3: Number and place value  
Week 4-8: Addition and Subtraction  
Week 9-12: Multiplication and Division A

Week 1-3: Multiplication and Division B  
Week 4-6: Measurement – Length and Perimeter  
Week 7-9: Fractions A  
Week 10-12: Measurement – Mass and Capacity

Y3 ADDITION	Y3 SUBTRACTION	Y3 MULTIPLICATION	Y3 DIVISION	Y3 CALCULATING - FRACTIONS
Place value counters leading to column addition: HTO	Column method with regrouping: HTO	<ul style="list-style-type: none"> <li>Arrays</li> <li>Grid Method</li> </ul>	<ul style="list-style-type: none"> <li>Division with a remainder</li> <li>2digit divided by 1digit using base 10 or place value counters</li> </ul>	<ul style="list-style-type: none"> <li>Part whole models leading to addition and subtraction of numerators within one whole</li> </ul>
<b>Y3 VOCABULARY</b>				
Numbers to 1000, column addition and subtraction, product, scale up, leap year, twelve/twenty-four hour clock, roman numerals (I to XIII), greater or less than 90 degrees, orientation, horizontal, vertical, perpendicular, parallel, numerator, denominator, unit fraction, non-unit fraction, compare and order fractions, tenths, chart, bar chart, frequency table, Carroll diagram, Venn diagram, axis, axes, diagram, integer, perimeter, formal written method, analogue, digital				

### Assessment, Marking and Feedback in KS2

- Highlighting of learning objectives to show achievement daily (indicative marking); pink to signal achievement, blue to signal that it is not yet met.
- Mistakes/misconceptions highlighted in blue each time books are marked. Ticks will be used to show correct answers and dots to identify errors.
- In KS2, developmental marking will be undertaken at least twice per week which entails giving a comment to move learning forward. This will take the form of response tasks:
  - RT1:** children need to respond to blue highlighter misconceptions and/or take part in a focus group
  - RT2:** a fluency/consolidation task to secure arithmetic skills taught in the lesson.
  - RT3:** a reasoning task to move learning forward and encourage application of skills taught in the lesson.
- Marking of books should be carried out before the next maths session so that this can inform planning/teaching/focus groups. This will also inform ongoing tracking/target setting in the front of the books
- Children should respond to feedback as soon as possible after marking has been completed. Children should complete this in green pen.
- Verbal feedback should be recorded with VF & a note when given

### Planning and Delivery in KS2

- Mathematics is taught as a discrete lesson four times per week and as part of cross-curricular themes when appropriate.
- Lesson plans will demonstrate a balance of interactive and independent elements used in teaching, ensuring that all pupils engage with their learning.
- There will be a clear focus on direct, instructional teaching and interactive oral work with the whole class and targeted groups.
- Long-term planning, set out by the Mathematics Subject Lead, will be followed in each year group.
- Short-term planning is the responsibility of the class teacher. This is achieved by building on long-term planning and Calculation Policy, taking into account pupils' needs and identifying the method in which topics could be taught.
- All lessons will have clear learning objectives, which are shared and reviewed with pupils.
- Lessons will be differentiated to meet the needs of all pupils. This will be flexible and informed by assessment. In KS2, pupils are given increasing independence in selecting 'challenges' appropriate to their level of learning. Challenges vary in the level of complexity as follows:
  - Challenge A – Outside POS
  - Challenge B – WTS
  - Challenge C – EXS
  - Challenge D – GDS
- Homework will be set on a weekly basis and will build on that week's lesson objectives consolidating children's skills.



*“Mathematics is the music of reason.”*  
 — James Joseph Sylvester

## Guidance for staff

### Assessment, Marking and Feedback in KS1

- Highlighting of learning objectives to show achievement daily (indicative marking); pink to signal achievement, blue to signal that it is not yet met.
- Mistakes/misconceptions highlighted in blue each time books are marked. Ticks will be used to show correct answers and dots to identify errors.
- In KS1, developmental marking will take place at least twice per week (detailed feedback and written challenge for extension/consolidation as appropriate).
- Marking of books should be carried out before the next maths session so that this can inform planning/teaching/focus groups. This will also inform ongoing tracking/target setting in the front of the books
- Children should respond to feedback as soon as possible after marking has been completed. Children should complete this in green pen.
- Verbal feedback should be recorded with VF & a note when given

Y2 ADDITION	Y2 SUBTRACTION	Y2 MULTIPLICATION	Y2 DIVISION
<ul style="list-style-type: none"> <li>• Adding three single digits</li> <li>• Use of base 10 to combine two numbers:               <ul style="list-style-type: none"> <li>- partitioning tens &amp; ones to add</li> <li>- adding 10 and adjusting</li> <li>- bridging through 10</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Partitioning to bridge 10</li> <li>• Counting back in ones using a number line</li> <li>• Part whole connections: finding the difference</li> <li>• Use of base 10 with and without exchange</li> </ul>	<ul style="list-style-type: none"> <li>• Using number lines to show repeated groups</li> <li>• Arrays- showing commutative multiplication</li> </ul>	<ul style="list-style-type: none"> <li>• Division as grouping</li> <li>• Division within arrays- linked to multiplication</li> <li>• Repeated subtraction</li> </ul>
Y2 VOCABULARY			
<b>Number and Place Value</b> Numbers of 100 Hundreds Partition, recombine Hundred more/less	<b>Measure</b> Quarter past/to m/km, g/kg, l/ml Temperature (degrees) Pounds, pence Mass, volume, capacity Minutes Quarter past, quarter to	<b>Geometry</b> Rotation Clockwise, anticlockwise Straight line Ninety degrees, turn, right angle	<b>Geometry – shape</b> Size Symmetrical, line of symmetry Fold Match Mirror line, reflection Pattern, repeating pattern Nets
<b>Fractions</b> Three quarters, one third, a third Equivalence, equivalent	<b>Data/Statistics</b> Count, tally, sort Vote Graph, block graph, pictogram Represent Group, set, list	<b>Problem Solving</b> Predict Describe the pattern, describe the rule Find, find all, find different Investigate Efficient method	

Week 1-3: Fractions  
 Week 4-6: Measurement – Time  
 Week 7-8: Statistics  
 Week 9-10: Geometry – Position and Direction  
 Week 11-12: Assessment and Consolidation

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Week 1-4: Number and place value  
 Week 5-9: Addition and Subtraction  
 Week 10-12: Geometry - Shape

Week 1-2: Measurement - Money  
 Week 3-7: Multiplication and Division  
 Week 8-9: Measurement – Length and Height  
 Week 10-12: Measurement – Capacity, volume and temperature  
 Week 5-6: Multiplication and Division

Week 1 - 3: Multiplication & Division  
 Week 4 - 5: Fractions  
 Week 6: Geometry – Position and Direction  
 Week 7 - 8: Number and place value (within 100)  
 Week 9: Measurement – Money  
 Week 10 - 11: Measurement – Time  
 Week 12: Assessment and consolidation

Y1 ADDITION	Y1 SUBTRACTION	Y1 MULTIPLICATION	Y1 DIVISION
<ul style="list-style-type: none"> <li>• Combining two parts to make a whole: part whole model</li> <li>• Starting at the bigger number and counting on- using cubes, Numicon and number lines</li> <li>• Regrouping to make 10 using ten frame</li> </ul>	<ul style="list-style-type: none"> <li>• Partitioning to bridge 10</li> <li>• Counting back in ones using a number line</li> <li>• Part whole connections: finding the difference</li> </ul>	<ul style="list-style-type: none"> <li>• Doubling</li> <li>• Repeated addition of equal groups</li> <li>• Counting in multiples: use cubes, Numicon and other objects in the classroom</li> </ul>	<ul style="list-style-type: none"> <li>• Sharing objects into groups</li> <li>• Division as grouping e.g. I have 12 sweets and put them in groups of 3, how many groups?</li> </ul>
Y1 VOCABULARY			
<b>Number and Place Value</b> Greater, lesser Pair Units, ones, tens Tens more/less Figure (s) in order/ different order Above, below	<b>Addition and Subtraction</b> Number bonds Inverse Near doubles Difference between How many fewer is...than...? How much less is...?	<b>Multiplication and Division</b> Once, twice, three times. Count in tens (forwards from/backwards from) How many times? Lots of, groups of Multiple of, times, multiply, multiply by Repeated addition Array, row, column Group in twos, threes, etc Divided by, left, left over	<b>Measure</b> Midnight Now, soon, early, late Quick, quicker, quickly, fast, slow, slower Old, older, oldest, new, newer, newest Takes longer, takes less time Hour, o'clock, half past Watch, hands How long ago? How long will it be to...? How long will it take to...? How often? Always, never, often, sometimes, usually Once, twice... First, second, third, etc Close to, about the same as, just over, just under Enough, not enough Width, depth Long, short, tall, high Low, wide, narrow, deep, shallow, thick, thin Far, near, close Metre, ruler, metre stick Costs more, costs less, dear(er), cheaper, costs the same as
<b>Geometry</b> Position Around Opposite Apart Between, edge, centre Corner Direction Journey Left, right Across Near Along To, from Movement Whole turn, half turn Stretch, bend Group Hollow	<b>Fractions</b> Equal parts, four equal parts Two halves A quarter, two quarter	<b>Problem Solving</b> Place, fit Arrange, rearrange Change, change over Split, separate Carry on, continue, repeat Choose, collect Record, trace, copy, complete, finish, end Fill in, shade, colour, cross, draw, draw a line between, join (up), arrow Answer, check, same number(s), different number(s), missing number(s) Number facts Abacus, rods Best way, another way	

Week 1 - 3: Number and place value (within 20)  
 Week 4 - 6: Addition and Subtraction (within 20)  
 Week 7 - 8: Number and place value (within 50)  
 Week 9 - 10: Measurement – Length & Height  
 Week 11 - 12: Measurement – Mass & Volume

Week 1 - 5: Number and place value (within 10)  
 Week 6 - 10: Addition and Subtraction (within 10)  
 Week 11: Geometry - Shape  
 Week 12: Assessment & Consolidation

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**1**

Week 1-2: Number patterns, ordering and estimation within 20  
 Week 3: Consolidation of 2D and 3D shapes  
 Week 4-5: Addition and subtraction within 20  
 Week 6: Exploring pattern and creating shapes  
 Week 7: Doubling  
 Week 8: Sharing/grouping  
 Week 9: Odd and even numbers  
 Week 10 -13: Problem solving and consolidation

YEAR  
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Weeks 1-3: Baseline/Settling into provision  
 Week 4: Sorting and matching  
 Week 5: Comparing measures and subitising  
 Week 6: Pattern  
 Week 7: Numbers 1-3  
 Week 8: More/less/fewer & addition within 3  
 Week 9: 2D Shape, positional language  
 Week 10: Numbers 4 and 5  
 Week 11: More/less/fewer & addition within 5  
 Week 12: 2D Shape, positional language  
 Week 13: Time incl. sequence of the day

Week 1: Composition to 5 with equal/unequal groups  
 Week 2: Composition of numbers – within 3 groups  
 Week 3: Measuring capacity  
 Week 4: Numbers 6,7 and 8  
 Week 5: Matching 6,7 and 8 / combining 2 groups  
 Week 6: Height and length  
 Week 7: Numbers 9 and 10  
 Week 8: Comparing within 10 /counting backwards  
 Week 9: Building 9 and 10 / 3D shapes  
 Week 10 -12: Consolidation

YR ADDITION STRATEGIES	YR SUBTRACTION STRATEGIES	YR MULTIPLICATION STRATEGIES	YR DIVISION STRATEGIES
<ul style="list-style-type: none"> <li>• Combining two parts to make a whole: part whole model/tens frames</li> <li>• Starting at the bigger number and counting on- using cubes, numicon and number lines</li> </ul>	<ul style="list-style-type: none"> <li>• Take away ones: part whole model/tens frames</li> <li>• Counting back in ones using a number line</li> </ul>	Doubling	<ul style="list-style-type: none"> <li>• Sharing objects into groups</li> </ul>
YR VOCABULARY			
<b>Number and Place Value</b> Number One, two, three to twenty and beyond. Count on/up/to/from/down Before, after More, less, many, few, fewer, fewest, smaller, smallest Equal to, the same as Odd, even Digit Numeral Compare Order Value Between, halfway between Zero	<b>Addition and Subtraction</b> Number line Add, more, plus, make, sum, total, altogether Double Half, halve Equals, is the same (including equals sign) How many more to make...? How many more is... then...? How much more is...? Subtract, take away, minus. How many are left?	<b>Multiplication and Division</b> Odd, even Double, halve Share, share equally Group in pairs Equal groups of Divide	<b>Measure</b> Compare Full, half, empty Holds Container Weigh, weighs, balance Heavy, heavier, heaviest, light, lighter, lightest Scales Time Days, week, month, year, weekend Morning, afternoon, evening, night Bedtime, dinnertime, playtime Today, yesterday, tomorrow Before, after, next, last Quickest, fastest, slowest, furthest Clock Once First, second, third Estimate Length, height Longer, longest, shorter, shortest, taller, tallest, higher, highest, Money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change How much? How many? Total
<b>Geometry - Position and Direction</b> Over, under, underneath, above, below, top, bottom, side On, in, outside, inside In front, behind Front, back Before, after Beside, next to Middle Up, down, forwards, backwards. Sideways Near, far Through Towards, away from Side, roll, turn	<b>Geometry – Properties of Shape</b> Sort Cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square, rectangle, pentagon, hexagon Shape, 2D, 3D Flat, curved, straight, round Solid Corner Face, side, vertices, edge Make, build, draw	<b>Fractions</b> Whole Equal One half	<b>Problem solving</b> Listen, join in Say, think, imagine, remember Start from, finish at Look at, point to Put What comes next? Find, use, make, build Tell me, describe, pick out, talk about, explain, show me Read, write Tick, draw a line, ring Cost Count, work out Number line, number track, number square, number cards Counters, cubes, blocks, die, dice, dominoes, pegs, peg board Same way, different way In order, in a different order Prove it Numicon

### Planning and Delivery in KS1

- Mathematics is taught as a discrete lesson four times per week and as part of cross-curricular themes when appropriate.
- Lesson plans will demonstrate a balance of interactive and independent elements used in teaching, ensuring that all pupils engage with their learning.
- There will be a clear focus on direct, instructional teaching and interactive oral work with the whole class and targeted groups.
- Long-term planning, set out by the Mathematics Subject Lead, will be followed in each year group.
- Short-term planning is the responsibility of the class teacher. This is achieved by building on long-term planning and Calculation Policy, taking into account pupils' needs and identifying the method in which topics could be taught.
- All lessons will have clear learning objectives, which are shared and reviewed with pupils.
- Lessons will be differentiated to meet the needs of all pupils. This will be flexible and informed by assessment, marking and feedback.
- In KS1, differentiation will usually be by task, resources or support and led by the teacher.
- Homework will be set on a weekly basis and will build on that week's lesson objectives to consolidate children's skills.