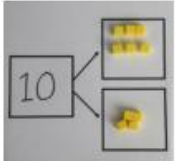
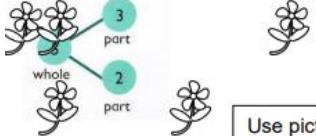
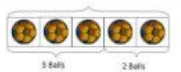



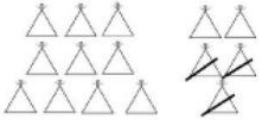

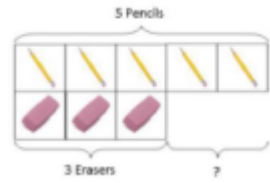
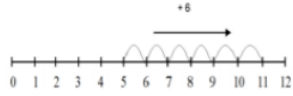


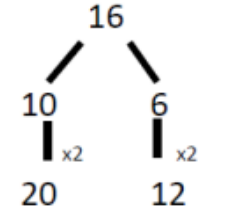



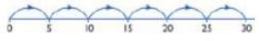

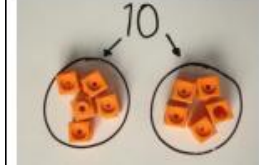


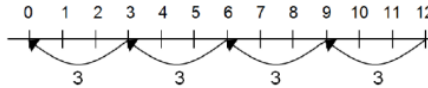
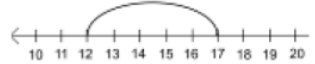
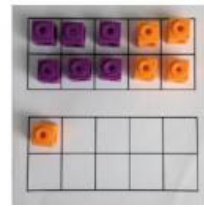




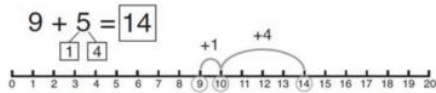
Maths Curriculum Map

Year 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Core Curriculum</p>	<p>Number: Place Value (within 10)</p> <ul style="list-style-type: none"> Sort, count and represent objects Count, read and write forwards and backwards from any number 0-10 Count one more and one less One-to-one correspondence to compare groups Compare groups using language such as equal, more/greater, less/fewer Introduce <, > and = symbols Compare, order numbers and groups of objects Ordinal numbers (1st, 2nd, 3rd ...) Use a number line for counting 	<p>Number: Addition and Subtraction (within 10)</p> <ul style="list-style-type: none"> Use a part-whole model Find number bonds for numbers within 10 Compare number bonds Addition-adding together, adding more, finding a part Subtraction-taking away, how many left? Subtraction-finding a part, breaking away, counting back, finding the difference Fact families Comparing addition and subtraction statements <p>Geometry: Shape</p> <ul style="list-style-type: none"> Recognise and name 3-D shapes Sort 3-D shapes Recognise and name 2-D shapes Sort 2-D shapes Make patterns with 2-D and 3-D shapes <p>Number: Place Value (within 20)</p>	<p>Number: Addition and Subtraction (within 20)</p> <ul style="list-style-type: none"> Add by counting on Find and make number bonds Add by making 10 Subtraction including crossing 10 Related facts Compare number sentences <p>Number: Place Value (within 50)</p> <ul style="list-style-type: none"> Represent numbers to 50 using tens and ones One more one less Compare objects and numbers within 50 Order numbers within 50 Count in 2s and 5s 	<p>Measurement: Length and Height</p> <ul style="list-style-type: none"> Compare lengths and heights Measure length <p>Measurement: Weight and Volume</p> <ul style="list-style-type: none"> Introduce weight and mass Measure and compare mass Introduce capacity and volume Measure capacity and volume 	<p>Number: Multiplication and Division</p> <ul style="list-style-type: none"> Count in 2s, 5s, 10s Make and add equal groups Make arrays Make doubles Make equal groups-grouping and sharing <p>Number: Fractions</p> <ul style="list-style-type: none"> Find halves and quarters <p>Geometry: Position and Direction</p> <ul style="list-style-type: none"> Describe turns and position 	<p>Number: Place Value (within 100)</p> <ul style="list-style-type: none"> Count forwards and backwards within 100 Partition numbers Compare and order numbers One more, one less <p>Measurement: Money</p> <ul style="list-style-type: none"> Recognise coins and notes Count in coins <p>Measurement: Time</p> <ul style="list-style-type: none"> Before and after Dates Tell time to the hour and half hour Compare time

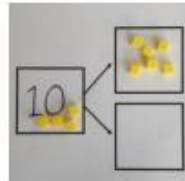
	Addition	Subtraction	Multiplication	Division
Calculation Methods: Concrete Pictorial Abstract	<p><u>Combining two parts to make a whole: part whole model</u></p>  <p>Use cubes to add two numbers together as a group or in a bar.</p>   <p>Use pictures to add two numbers together as a group or in a bar.</p> <p><u>Starting at the bigger number and counting on</u></p> 	<p><u>Taking ones away</u></p> <p>Use physical objects, counters, cubes etc to show how objects can be taken away.</p>   <p>Cross out drawn objects to show what has been taken away.</p>  <p><u>Find the difference</u></p> <p>Compare amounts and objects to find the difference. Use cubes to build towers or make bars to find the difference.</p>  <p>Use basic bar models with items to find the difference.</p>  <p>Count on to find the difference.</p> 	<p><u>Doubling</u></p> <p>Use practical activities to show how to double a number.</p>  <p>double 4 is 8 4 x 2 = 8</p> <p>Draw pictures to show how to double a number.</p> <p>Double 4 is 8</p>   <p><u>Counting in multiples</u></p> <p>Count in multiples supported by concrete objects in equal groups.</p>     <p>Use a number line or pictures to continue support in counting in multiples.</p>	<p><u>Sharing objects into groups</u></p>  <p>I have 10 cubes, can you share them equally in 2 groups?</p>  <p>Children use pictures or shapes to share quantities</p>  <p>$8 \div 2 = 4$</p> <p>Divide quantities into equal groups. Use cubes, counters, objects, or place value counters to aid understanding.</p>  <p>Use a number line to show jumps in groups. The number of jumps equals the number of groups.</p>  <p><u>Moving on to the abstract</u> $9 \div 3 = 3$</p>
		<p>$12 + 5 = 17$</p>  <p>Start at the larger number on the number line and count on in ones or in one jump to find the answer.</p> <p><u>Regrouping to make 10</u></p>  <p>Start with the bigger number and use the smaller number to make 10.</p>		

This is an example of a pictorial representation which could be used.

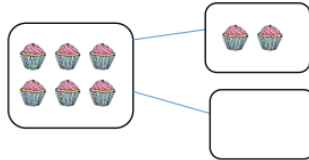


Moving onto the abstract $5 + 12 = 17$

Link to addition- use the part whole model to help explain the inverse between addition and subtraction.



Use a pictorial representation of objects to show the part part whole model.



Move to using numbers within the part whole model.

Moving onto abstract $18 - 3 = 15$

Count in multiples of a number aloud. Write sequences with multiples of numbers. 2, 4, 6, 8, 10 5, 10, 15, 20, 25, 30

New Vocabulary For Y1

Number and Place value: 20-100 count (on/up/to/from/ down), least, fewest, smallest, greater, lesser, equal to, odd, even, units, tens, ten more/less, digit, numeral, figure(s), compare (In) order/a different order, size, value, between, half way between, above, below.

Addition and subtraction: number bonds, addition, plus, sum, greater, inverse, near double, halve, is the same as, (including equals sign), difference between, how many more to make..?, how, many more is...than..?, how much more is..? subtract, minus, how many fewer is...than..?, how much less is..?

Fractions: whole, equal parts, four equal parts, one half, two halves, a quarter, two quarters.

Measurement: size, bigger, larger, length, width, height, depth, taller, tallest, high, higher, highest, wide, narrow, shallow, close, Metre, metre stick. half full, balances, heavier, heaviest, lighter, lightest, scales.

Measurement (Time): Seasons (Spring, Summer, Autumn, Winter) quicker, quickest, quickly, faster, fastest, slower, slowest, slowly, older, oldest, newer, newest, takes longer, takes less time, hour, o clock, half past, hands, how long ago? how long will it be to...? how long will it take to...? how often? often, sometimes, usually, once, twice, second, third etc, estimate, close to, about the same as, just over/under, too many/few, not enough, enough. spend, spent, change, dear(er), costs more, costs less, cheaper, costs the same as, how much?

Multiplication and Division: odd, even, count in twos, fives, tens, (forwards from/backwards from), how many times?, multiple of, multiply, multiply by repeated addition, array, row, column, halve, share equally, group in pairs, threes, etc. equal groups of, divide, divided by

Geometry (Position and Direction): over, beside, opposite, apart, between, edge, centre, corner, direction, journey, left, right, sideways, near, through, towards, away from, movement, whole turn, half turn.

Geometry (Properties of Shape): pyramid, cone, cylinder. curved, hollow, solid, corner (point, pointed) face, side, edge.

General / Problem Solving: arrange, rearrange, change over, separate, continue, repeat, describe, explain, record, trace, complete, shade, same number(s)/different number(s)/missing number(s) number facts, same way, different way, best way, another way, in a different order, not all.

<p>Continuous Curriculum (Maths Meetings)</p>	<p>Geometry: Shape Recognise and name 3-D shapes; Sort 3-D shapes; Recognise and name 2-D shapes; Sort 2-D shapes; Make patterns with 2-D and 3-D shapes</p> <p>Geometry: Position and Direction Describe turns and position</p> <p>Measurement: Length and Height Compare lengths and heights; Measure length</p> <p>Measurement: Weight and Volume Introduce weight and mass; Measure and compare mass; Introduce capacity and volume; Measure capacity and volume</p> <p>Measurement: Money Recognise coins and notes; Count in coins</p> <p>Measurement: Time Before and after; Dates; Tell time to the hour and half hour; Compare time</p> <p>Number: Fractions Find halves and quarters</p>					
<p>Arithmetic Fluency (Key Focus)</p>	<p>Counting Count to and across 20 forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to 20 in numerals Count in 2s</p>		<p>Number facts (+ -) Given a number, identify 1 more, 1 less Represent and use number bonds and related subtraction facts within 20</p>		<p>Mental (+ -) Add and subtract one-digit and two-digit numbers to 20, including 0</p>	<p>Written (+ -) Read, write and interpret mathematical statements involving +, - and = signs</p>
<p>Consolidation (To be Included in Arithmetic Lessons)</p>	<p>Addition and subtraction – count on and back (Reception, Summer 1)</p>	<p>Number: Place Value (within 10) (Year 1, Autumn 1)</p>	<p>Number: Addition and Subtraction (within 10) (Year 1, Autumn 2)</p>	<p>Number: Addition and Subtraction (within 20) (Year 1, Spring 1)</p>	<p>Number: Place Value (within 50) (Year 1, Spring 1)</p>	<p>Number: Multiplication and Division (Year 1, Summer 1)</p>
<p>Mental Maths</p>	<p>Number and Place Value (Securing Numbers, Ordering and Comparing): Counting forwards and backwards in 1s to 20 - teen numbers; Order a set of consecutive and then random numbers to 20.</p> <p>Number and Place Value (Counting): Counting forwards in multiples of 10 to 100; Counting forwards and backwards in 1s to 100. Adding any number to 10 <i>e.g.</i>, $10 + 5$, $10 + 7$</p> <p>Addition and Subtraction (Multiples): Adding / subtracting 1 more / less to any number up to 100; Number bonds to 5 extending to 10; Counting on from largest number / re-ordering numbers to add <i>e.g.</i>, $1 + 8$ Counting on / back in 1s to add / subtract any 1-digit number to teens number <i>e.g.</i>, $13 + 5$, $17 - 2$; Partition numbers to 10 (using concrete resources for number bonds) to find addition and subtraction facts. <i>e.g.</i>, $8 + 2 = 10$ so $8 + 3 = 8 + 2 + 1$; $10 - 2 = 8$ so $11 - 2 = 9$; Number bonds to 10; Number bonds to 20 <i>e.g.</i>, $8 + 2 = 10$ so $18 + 2 = 20$; $10 - 8 = 2$ so $20 - 18 = 2$</p> <p>Addition and Subtraction (Adding / Subtracting 10's, 100's, 1000's): Counting in multiples of 10s; Representing 2 digit numbers using concrete resources; What changes / stays the same when you add / subtract 1, 10?</p> <p>Multiplication and Division (Doubling Numbers / Near Doubles): Recall double numbers to 5/10 <i>e.g.</i>, up to double $10 = 20$; Doubling 1 digit numbers <i>e.g.</i> $6 + 6$; Adding near doubles (adjusting) <i>e.g.</i> $6 + 7$ (<i>double 6 add 1 or double 7 subtract 1</i>); Halve even numbers to 20; Half of 20 = 10; Recognise odd numbers as those that cannot be shared into 2 equal groups; Adding near doubles <i>e.g.</i> $6 + 7$</p>					
<p>Multiplication Facts Count in multiples of x1 x2 Consolidate counting in multiples of x1 x2 and introduce counting in multiples of x2 x5 x10</p>			<p>Number Talk/ STEM Sentences I noticed that... My first step is... The answer is...because... I think...because...</p>			



Maths Curriculum Map

Year 2



Autumn 1

Autumn 2

Spring 1

Spring 2

Summer 1

Summer 2

Core Curriculum

Number: Place Value

- Count forwards and backwards within 20
- Tens and ones within 20
- Count forwards and backwards within 50
- Tens and ones within 50
- Compare numbers within 50
- Count objects, read, write and represent numbers to 100
- Tens and ones with a part whole model
- Tens and ones using addition
- Use a place value chart
- Compare and order objects and numbers

Number: Addition and Subtraction

- Fact families-addition and subtraction bonds to 20
- Compare number sentences and related facts
- Bonds to 100 (10s)
- Add and subtract 1s
- 10 more and 10 less
- Add and subtract 10s
- Add by making 10
- Add a 2 and 1 digit number – crossing 10
- Subtract a 1 digit from a 2 digit number-crossing 10
- Add 2 digit numbers not crossing then crossing 10

Measurement: Money

- Recognise coins and notes
- Count money-pence and pounds
- Select money
- Make the same amount
- Compare money
- Find the total, difference, change
- Two step problems

Number: Multiplication and Division

- Make and add equal groups
- Make arrays

Number: Multiplication and Division

- Recognise, make and add equal groups
- Multiplication sentences using x symbol
- Multiplication sentences from pictures
- Use arrays
- Make doubles
- 2,5, and 10 times table
- Make equal groups-sharing and grouping
- Divide by 2
- Odd and even numbers
- Divide by 5 and 10

Statistics

- Make tally charts
- Draw and interpret pictograms (1-1)
- Draw and interpret pictograms (2,5 and 10)
- Block diagrams

Geometry: Properties of Shape

- Recognise 2D and 3D shapes
- Count sides and vertices on 2D shapes
- Draw, sort and make patterns with 2D shapes
- Lines of symmetry
- Count faces, edges and vertices on 3D shapes
- Sort and make patterns with 3D shapes

Number: Fractions

- Make equal parts
- Recognise and find half and quarter
- Recognise and find one third
- Unit and non-unit fractions
- Equivalence of $\frac{1}{2}$ and $\frac{2}{4}$
- Find three-quarters
- Count in fractions

Measurement: Length and Height

- Compare lengths and heights
- Measure lengths in cm and m
- Compare and order lengths
- Four operations with lengths

Geometry: Position and Direction


- Describe position, movement and turns
- Make patterns with shapes

Measurement: Time

- Tell time to the hour and half hour
- clock and half past
- Quarter past and quarter to
- Tell time to 5 minutes
- Hours and days
- Find and compare durations of time

Measurement: Mass, Capacity and Temperature

- Introduce weight and mass
- Measure and compare mass
- Measure mass in grams
- Introduce capacity and volume
- Measure capacity
- Compare volume
- Millilitres and litres
- Temperature

	$21 + 42 =$ $\begin{array}{r} 21 \\ + 42 \\ \hline \end{array}$		<p>Use an array to write multiplication sentences and reinforce repeated addition.</p>  <hr/> $5 + 5 + 5 = 15$ $3 + 3 + 3 + 3 + 3 = 15$ $5 \times 3 = 15$ $3 \times 5 = 15$	<p><u>Moving onto the abstract</u> $28 \div 7 = 4$ Divide 28 into 7 groups. How many are in each group?</p>
<p>New Vocabulary For Y2</p>	<p>Number and Place Value: numbers to one hundred, hundreds, partition, recombine, hundred more/less, represents, exchange,</p> <p>Statistics: count, tally, sort, vote, graph, block graph, pictogram, represent group, set, list, table label, title most popular, most common, least popular, least common</p> <p>Fractions: three quarters, one third, a third, equivalence, equivalent.</p> <p>Measurement: quarter past/to, fortnight temperature (degrees) m/cm, g/kg, ml/l</p> <p>Multiplication and Division: count in multiples of 3</p> <p>Geometry (Position and Direction): rotation, clockwise, anticlockwise, straight-line, ninety-degree turn, right angle.</p> <p>Geometry (Properties of shape): smaller, symmetrical, line of symmetry, fold, match, mirror line, reflection, pattern, repeating pattern, vertices, vertex. pentagon, hexagon, octagon, circular, triangular, right angle.</p> <p>General/Problem Solving: predict, describe the pattern, describe the rule, find, find all, find different, investigate.</p>			
<p>Continuous Curriculum (Maths Meetings)</p>	<p>Measurement: Money Recognise coins and notes; Count money-pence and pounds; Select money; Make the same amount; Compare money; Find the total, difference, change; Two step problems</p> <p>Statistics Make tally charts; Draw and interpret pictograms (1-1); Draw and interpret pictograms (2,5 and 10); Block diagrams</p> <p>Geometry: Properties of Shape Recognise 2D and 3D shapes; Count sides and vertices on 2D shapes; Draw, sort and make patterns with 2D shapes; Lines of symmetry; Count faces, edges, and vertices on 3D shapes; Sort and make patterns with 3D shapes</p> <p>Number: Fractions Make equal parts; Recognise and find half and quarter; Recognise and find one third; Unit and non-unit fractions; Equivalence of $\frac{1}{2}$ and $\frac{2}{4}$; Find three-quarters; Count in fractions</p> <p>Measurement: Length and Height Compare lengths and heights; Measure lengths in cm and m; Compare and order lengths; Four operations with lengths</p> <p>Geometry: Position and Direction Describe position, movement and turns; Make patterns with shapes</p> <p>Measurement: Time Tell time to the hour and half hour; O'clock and half past; Quarter past and quarter to; Tell time to 5 minutes; Hours and days; Find and compare durations of time</p> <p>Measurement: Mass, Capacity and Temperature Introduce weight and mass; Measure and compare mass; Measure mass in grams; Introduce capacity and volume; Measure capacity; Compare volume; Millilitres and litres; Temperature</p>			

<p>Arithmetic Fluency (Key Focus)</p>	<p>Counting Count to and across 100 from any given number Count, read and write numbers to 100 in numerals Count in multiples of 2, 3, 5 and 10 from any number forward and back.</p>	<p>Number facts (+ -) Use place value and number facts to solve problems Recall and use addition and subtraction facts to 20 fluently Derive and use related facts up to 100</p>	<p>Mental (+ -) Add and subtract numbers using concrete objects, pictorial representations and mentally:</p> <ul style="list-style-type: none"> • A two digit number and 1s • A two digit number and 10s • 2 two digit numbers • Add 3 one digit numbers <p>Show that addition can be done in any order (commutative) and subtraction of a 1 digit number from another cannot</p>	<p>Written (+ -) Record addition and subtraction in columns to prepare for formal written methods with larger numbers</p>	<p>Number facts (x ÷) Recall and use multiplication and division facts for the 2,5 and 10 times tables, including recognising odd and even numbers</p>	<p>Mental / Written (x ÷) Calculate mathematical statements for multiplication and division within the 2, 5 and 10 times tables. Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot Write the mathematical statements using \times \div and $=$ signs</p>
<p>Consolidation (To be Included in Arithmetic Lessons)</p>	<p>Number: Place Value (within 100) (Year 1, Summer 2)</p>	<p>Number: Addition and Subtraction (Year 2, Autumn 1)</p>	<p>Number: Multiplication and Division (Year 2, Autumn 2)</p>	<p>Number: Place Value (within 100) (Year 1, Summer 2)</p>	<p>Number: Fractions (Year 2, Spring 2)</p>	<p>Number: Addition and Subtraction (Year 2, Autumn 1)</p>
<p>Mental Maths</p>	<p>Number and Place Value (Securing Numbers, Ordering and Comparing): Counting forwards and backwards in 1s to 100; Order a set of random numbers to 100; Compare numbers using symbols $<$ and $>$</p> <p>Number and Place Value (Counting): Counting forwards/backwards in 10s and 1s to 100 (mixed counting) e.g., 20, 30, 40 etc, 20, 30, 31, 32, 33 etc, 80, 70, 60 etc</p> <p>Addition and Subtraction (Multiples): Recall number bonds to 20 and use this to find bonds to 18, 19; Add 3 numbers where bond to 10 evident; Reorder numbers to add e.g., $7 + 4 + 3$; Partition numbers (1 number) using number bonds to add/subtract (reordering numbers) e.g. $8 + 7 = 8 + 2 + 5$, $13 - 5 = 13 - (3 - 5)$, $16 + 5 (16 + 4 + 1)$; Subtracting any single digit number from a multiple of 10 e.g. $80 - 7$ (knowledge of bonds to 10)</p> <p>Addition and Subtraction (Adding / Subtracting 10's, 100's, 1000's): Add 1 to any number to 100; Counting in 10s from any number (forwards/backwards); Add/subtract near 10s and adjusting e.g. 9, 11 Number bonds to 100 e.g. $70 + 30$; Adding multiples of ten e.g. $30 + 20$, $30 + 60$, $30 + 80$</p> <p>Multiplication and Division (Doubling Numbers / Near Doubles): Double teen numbers $16 + 16$ Near doubles $16 + 17$; Double multiples of 10 to 100 e.g. double 20; Halve multiples of 10 with even number of 10s to 100 e.g. half of 40. Focus on doubling/halving multiples of 10 with odd number of 10s by partitioning and recombining e.g. half of 30, 50, 70, $30 = 20 + 10$, Half is $10 + 5 = 15$; Doubling even numbers up to 100 by partitioning and recombining; Halving even numbers up to 100 by partitioning and recombining.</p> <p>Multiplication and Division (Order of Operations): Explore commutativity using arrays e.g. $4 \times 3 = 3 \times 4$; Rewrite repeated addition as multiplication; Relationship between 5x and 10x table and doubling and halving.</p> <p>Fractions Decimals and Percentages (Comparing, Ordering and Calculating): Pupils should count in fractions up to 10, starting from any number and using the $\frac{1}{2}$ and $\frac{2}{4}$ equivalence on the number line</p>					
<p>Multiplication Facts Consolidate counting in multiples of x2 x5 x10 and introduce counting in multiples of 11. Consolidate counting in multiples of x2 x5 x10 x11 and introduce counting in multiples of x3. Consolidate counting in multiples of x2 x5 x10 x11 x3 and introduce counting in multiples of x4.</p>			<p>Number Talk/ STEM Sentences I noticed that... My first step... The answer is...because... I think...because.....reminds me of ... I predict that...</p>			



Maths Curriculum Map

Year 3



Autumn 1

Autumn 2

Spring 1

Spring 2

Summer 1

Summer 2

Core Curriculum

Number: Place Value

- Represent numbers to 100
- Tens and ones using addition
- Hundreds
- Represent numbers to 1000
- 100s, 10s and 1s
- Number line to 1000
- Find 1,10,100 more or less than a given number
- Compare objects to 1000
- Compare and order numbers to 1000
- Count in 50s

Number: Addition and Subtraction

- Add and subtract multiples of 100
- Add and subtract 1s
- Add and subtract 2,3 and 1 digit numbers and crossing 10
- Subtract 2 digit and 1 digit and then 3 digit and 1 digit numbers and crossing 10
- Subtract 3 and 2 digit numbers and crossing 100
- Add and subtract 100s
- Spot patterns
- Add two 2 digit numbers crossing 10
- Subtract 2 digit from a 2 digit number crossing 10

Number: Multiplication and Division

- Multiplication-equal groups
- Multiplication using the symbol
- Using arrays
- 2 and 5 times table
- Make equal groups-sharing and grouping
- Divide by 2,5 and 10
- Multiply and divide by 3
- 3 times table

Number: Multiplication and Division

- Consolidate 2,4 and 8 times tables
- Compare statements
- Related calculations
- Multiply and divide 2 digit by 1 digit
- Scaling
- How many ways?

Measurement: Money

- Convert pounds and pence
- Add and subtract money
- Give change

Statistics

- Make tally charts
- Draw and interpret pictograms (2,5 and 10)
- Pictograms, bar charts, tables

Measurement: Length and Perimeter

- Measure length (m)
- Equivalent lengths m, cm and mm
- Compare lengths
- Add and subtract lengths
- Measure and calculate perimeter

Number: Fractions

- Make equal parts
- Recognise and find half, quarter and third
- Unit and non-unit fractions
- Equivalence of $\frac{1}{2}$ and $\frac{2}{4}$
- Count in fractions

Number: Fractions

- Making the whole
- Count in tenths
- Tenths as decimals
- Fractions on a number line
- Fractions of a set of objects
- Equivalent fractions
- Compare and order fractions
- Add and subtract fractions

Measurement: Time

- Clock, half past, quarter to and quarter past
- Months and years
- Hours in a day
- Telling the time to 5 minutes and the minute
- Using am and pm
- 24 hour clock
- Find and compare durations
- Start and end times
- Measuring time in seconds

Geometry: Properties of Shape

- Turns and angles
- Right angles in shapes
- Compare angles
- Draw accurately
- Horizontal, vertical, parallel and perpendicular
- Recognise and describe 2D and 3D shapes
- Make 3D shapes

Measurement: Mass and Capacity

- Compare and measure mass
- Add and subtract mass
- Compare volume
- Measure and compare capacity
- Add and subtract capacity
- Temperature

Calculation Methods: Concrete Pictorial Abstract

Addition

Column method regrouping

Children can draw a pictorial representation of the columns and place value counters to further support their learning and understanding.

Start by partitioning the numbers before moving on to clearly show the exchange below the addition. This is expanded form:

$$\begin{array}{r} 20 + 5 \\ 40 + 8 \\ 60 + 13 = 73 \end{array}$$

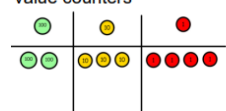
Moving onto the abstract of column addition

Subtraction

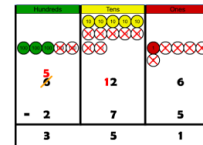
Column method with regrouping

Use Base 10 to start with before moving on to place value counters. Start with one exchange before moving onto subtractions with 2 exchanges.

Make the larger number with the place value counters

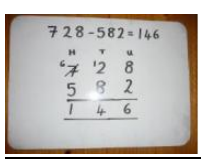


Calculations

$$\begin{array}{r} 234 \\ - 88 \\ \hline \end{array}$$


Draw the counters onto a place value grid and show what you have taken away by crossing the counters out as well as clearly showing the exchanges you make.

Moving onto the abstract of decomposition



Multiplication

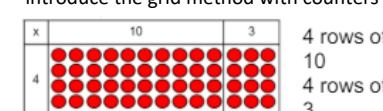
Revisit concrete, pictorial, and abstract strategies from Year Two:

Repeated Addition

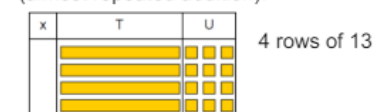
Arrays showing commutative multiplication

Grid Method

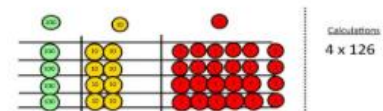
Show the link with arrays to first introduce the grid method with counters



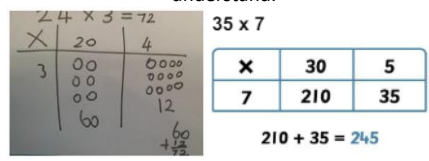
Move on to using Base 10 to move towards a more compact method (almost repeated addition).



Use base 10 – then, once secure, move on to place value counters to show how we are finding groups of a number. We are multiplying by 4 so we need 4 rows. Fill each row with 126.



Children can represent the work they have done with place value counters in a way that they understand.



Moving forward, multiply by a 2 digit number showing the different rows within the grid method.

18 x 13

	10	8
10	100	80
3	30	24

Moving onto the abstract of short multiplication

Division

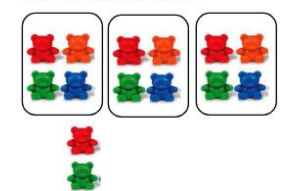
Revisit concrete, pictorial, and abstract strategies from Year Two:

Division with arrays

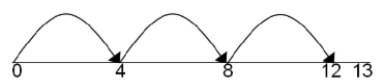
Division with a remainder

14 ÷ 3 =

Divide objects between groups and see how much is left over




Jump forward in equal jumps on a number line then see how many more you need to jump to find a remainder.



Draw dots and group them to divide an amount and clearly show a remainder.

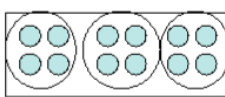
14 ÷ 4



96 ÷ 3

	Tens	Units
	3	2
3	30	6

Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.



Only for SEN children. Not practical for higher numbers. As soon as understood, move onto abstract.

Moving onto the abstract of short division

Begin with divisions that divide equally with no remainder.

$$\begin{array}{r} 218 \\ 3 \overline{) 872} \end{array}$$

<p>New Vocabulary for Y3</p>	<p>Number and Place Value: numbers to 1,000</p> <p>Addition and subtraction: column addition and subtraction</p> <p>Fractions: numerator, denominator, unit fraction, non-unit fraction, compare and order, tenths</p> <p>Measurement: leap year twelve-hour/24- hour clock, am/pm, century roman numerals I-XII mm</p> <p>Multiplication and Division: count in multiples of 4, 8 and 11, product, scale up</p> <p>Geometry (Position and Direction): greater/less than 90 degrees orientation (same orientation, different orientation), north, south, east, west</p> <p>Geometry (Properties of Shape): horizontal, vertical, perpendicular and parallel lines. perimeter hemi-sphere, prism, semi-circle</p> <p>Statistics: chart, bar chart, frequency table, Carroll diagram, Venn diagram, axis, axes diagram</p>					
<p>Continuous Curriculum (Maths Meetings)</p>	<p>Measurement: Money Convert pounds and pence; Add and subtract money; Give change</p> <p>Statistics Make tally charts; Draw and interpret pictograms (2,5 and 10); Pictograms, bar charts, tables</p> <p>Measurement: Length and Perimeter Measure length (m); Equivalent lengths m, cm and mm; Compare lengths; Add and subtract lengths; Measure and calculate perimeter</p> <p>Number: Fractions Make equal parts; Recognise and find half, quarter and third; Unit and non-unit fractions; Equivalence of $\frac{1}{2}$ and $\frac{2}{4}$; Count in fractions; Making the whole; Count in tenths; Tenths as decimals; Fractions on a number line; Fractions of a set of objects; Equivalent fractions; Compare and order fractions; Add and subtract fractions</p> <p>Measurement: Time O'clock, half past, quarter to and quarter past; Months and years; Hours in a day; Telling the time to 5 minutes and the minute; Using am and pm; 24 hour clock; Find and compare durations; Start and end times; Measuring time in seconds</p> <p>Geometry: Properties of Shape Turns and angles; Right angles in shapes; Compare angles; Draw accurately; Horizontal, vertical, parallel and perpendicular; Recognise and describe 2D and 3D shapes; Make 3D shapes</p> <p>Measurement: Mass and Capacity Compare and measure mass; Add and subtract mass; Compare volume; Measure and compare capacity; Add and subtract capacity; Temperature</p>					
<p>Arithmetic Fluency (Key Focus)</p>	<p>Counting Count from 0 in multiples of 4,8,50 and 100 Find 10 or 100 more or less than a given number</p>	<p>Written (+ -) Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p>	<p>Mental (+ -) Add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> • A three digit number and 1s • A three digit number and 10s • A three digit number and 100s 	<p>Number facts (x ÷) Recall and use multiplication and division facts for the 3,4 and 8 times tables</p>	<p>Mental (+ -) /Written (x ÷) Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two digit numbers times one digit numbers, using mental methods Progress to formal written methods for multiplication and division</p>	<p>Fractions and Decimals 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 Add and subtract fractions with the same denominator within one whole</p>
<p>Consolidation (To be Included in Arithmetic Lessons)</p>	<p>Number: Multiplication and Division (Year 2, Spring 2)</p>	<p>Number: Place Value (Year 3, Autumn 1)</p>	<p>Number: Addition and Subtraction (Year 3, Autumn 1)</p>	<p>Number: Multiplication and Division (Year 3, Autumn 2 & Spring 1)</p>	<p>Number: Addition and Subtraction (Year 3, Autumn 1)</p>	<p>Number: Fractions (Year 3, Spring 2 & Summer 1)</p>

<p>Mental Maths</p>	<p>Number and Place Value (Securing Numbers, Ordering and Comparing): Count in 100, 10s, 1s from any number to 1000; Order a set of random numbers to 1000; Compare numbers using symbols < and > up to 1000</p> <p>Number and Place Value (Counting): Add 100 to any 2 / 3digit number e.g., $45 + 100$, $145 + 100$; Add multiples of 100 to any 2 / 3 digit number $45 + 200$, $145 + 200$, $145 + 700$ (regrouping)</p> <p>Addition and Subtraction (Multiples): Add any multiple of 10 to a 2/3 digit number e.g. $153 + 20$, $153 + 70$ (regrouping); Subtract any multiple of 10 from a 2/3 digit number, e.g. $153 - 20$, $153 - 70$ (regrouping) Counting in 10s e.g. Use number bonds/partitioning $153 - (50 + 20)$; To subtract many amounts, combine to add first in context. Eg $£1 - (20p - 30p)$, $£1 - 50p$</p> <p>Addition and Subtraction (Adding / Subtracting 10's, 100's, 1000's): Add 10 to any number, $43 + 10$, $143 + 10$, Add multiples of 10 to any number e.g. $43 + 30$ (no regrouping), $43 + 70$ (regrouping), $143 + 30$ (no regrouping), $143 + 70$ (regrouping); Explain effects of adding 10. <i>Why do 1s not change when adding 10s? When will 100s change?</i>; Add near multiples of 10 e.g. $+ 99$, 31, 29 etc including in simple money context e.g. $99p$, $£1.99$</p> <p>Multiplication and Division (Doubling Numbers / Near Doubles): Doubles of multiples of 10/near10s $60 + 60$, $60 + 70$; Review doubling/halving multiples of 10 with odd number of 10s by partitioning and recombining e.g. half of 30, 50, 70, $30 = 20+10$, Half is $10 + 5 = 15$; Double simple 3 digit numbers (multiples of 10, 50, 100) e.g. double 200, double 250</p> <p>Multiplication and Division (Order of Operations): Multiplication and division of whole numbers by 10 exploring the effect of moving digits e.g. 6×10, 10×10, 16×10; Use known facts to multiply and divide by multiples of 10 e.g. 6×3, 6×30 Reorder calculations using associative rule e.g., $4 \times 12 \times 5$, $4 \times 12 = 48$, $48 \times 5 = 240$, $4 \times 5 \times 12$, $4 \times 5 = 20$, 20×12; Knowledge of doubling e.g. double 4x table = 8x; Know that... e.g. $50 \times 2 = 100$, $25 \times 4 = 100$, $20 \times 5 = 100$; Link to measure and reading scales e.g. $50p \times 2 = £1.00$, $£50 \times 2 = £100$, $25p \times 4 = £1.00$ $£25 \times 4 = £100$, $20p \times 5 = £1.00$ $£20 \times 5 = £100$, $1000g = 1kg$ $1000ml = 1l$, $1000cm = 1km$, $1000 \div 2 = 500$ $1000 \div 4 = 250$, $\frac{1}{2} l/kg/km = 500$, $\frac{1}{4} l/kg/km = 250$, $\frac{3}{4} l/kg/km = 750$</p> <p>Fractions Decimals and Percentages (Comparing, Ordering and Calculating): count up and down in tenths.</p>
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<p>Multiplication Facts</p> <p>Consolidate counting in multiples of x2 x5 x10 x11 x3 x4 and introduce counting in multiples of x6.</p> <p>Consolidate counting in multiples of x2 x5 x10 x11 x3 x4 x6 and introduce counting in multiples of x7.</p> <p>Consolidate counting in multiples of x2 x5 x10 x11 x3 x4 x6 x7 and introduce counting in multiples of x8.</p>
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<p>Number Talk/STEM sentences</p> <p>I noticed that...</p> <p>My first step...</p> <p>The answer is...because...</p> <p>I think...because...</p> <p>...reminds me of ...</p> <p>I predict that...</p> <p>I know the problems is asking me to...</p> <p>I can defend my answer by...</p> <p>I agree/disagree with your answer because...</p>
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Maths Curriculum Map

Year 4



Autumn 1

Autumn 2

Spring 1

Spring 2

Summer 1

Summer 2

Core Curriculum

Number: Place Value

- Represent numbers to 1000
- 100s, 10s and 1s
- Number line to 1000
- Round to nearest 10, 100
- Count in 1000s
- 1000s, 100s, 10s, 1s
- Partitioning
- Number line to 10000
- Find 1, 10, 100 more or less
- 1000 more or less
- Compare numbers

Number: Addition and Subtraction

- Add and subtract 1s, 10s, 100s, 1000s
- Add two 3 digit numbers not crossing then crossing 10 and 100
- Add two 4 digit numbers, no exchange then one or more exchanges
- Subtract a 3 digit from a 3 digit number no exchange
- Subtract a 4 digit from a 4 digit number no exchange
- Subtract a 3 digit from a 3 digit number-exchange
- Subtract two 4 digit numbers-exchange
- Efficient subtraction
- Estimate answers and check strategies

Measurement: Length and Perimeter

- Equivalent lengths-m and cm, mm and cm
- Kilometres
- Add lengths
- Subtract lengths
- Measure perimeter
- Perimeter on a grid
- Perimeter of rectangles and rectilinear shapes

Number: Multiplication and Division

- Multiply and divide by 10 and 100
- Multiply by 1 and 0
- Divide by 1 and itself
- Multiply and divide by 3
- The 3 times table
- Multiply and divide by 6
- 6 times table and division facts
- Multiply and divide by 9
- 9 times table and division facts
- Multiply and divide by 7
- 7 times table and division facts

Number: Multiplication and Division

- 11 and 12 times table
- Multiply 3 numbers
- Factor pairs
- Efficient multiplication
- Written methods
- Multiply 2 digits by 1 digit
- Multiply 3 digits by 1 digit
- Divide 2 digits by 1 digit

Measurement: Area

- What is area?
- Counting squares
- Making shapes
- Comparing area

Number: Fractions

- Unit and non-unit fractions
- Tenths –count in tenths
- Equivalent fractions
- Fractions greater than 1
- Count in fractions
- Add fractions
- Add 2 or more fractions

Number: Decimals

- Recognise tenths and hundredths
- Tenths as decimals
- Tenths on a place value grid and number line
- Divide 1 then 2 digits by 10
- Hundredths as decimals
- Hundredths on a place value grid
- Divide 1 or 2 digits by 100

Number: Decimals

- Bonds to 10 and 100
- Make a whole
- Write, compare and order decimals
- Round decimals
- Halves and quarters

Measurement: Money

- Pounds and pence
- Ordering money
- Estimating money
- Convert pounds and pence
- Add and subtract money
- Find change
- Four operations

Measurement: Time

- Telling the time to 5 minutes
- Telling the time to the minute
- Using a.m. and p.m.
- 24 hour clock
- Hours, minute and seconds
- Years, months, weeks and days
- Analogue to digital-12 hour
- Analogue to digital -24 hour

Statistics

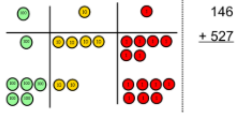
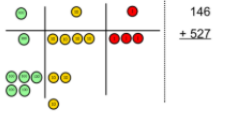
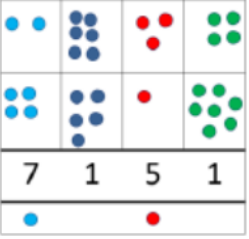
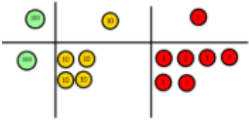

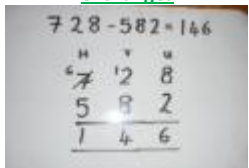
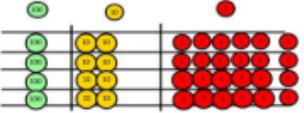
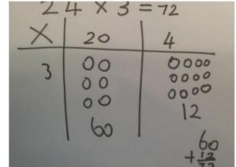
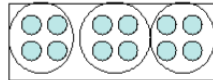
- Interpret charts
- Comparison, sum and difference
- Introduce line graphs

Geometry: Properties of Shape

- Turns and angles
- Right angles in shapes
- Compare, identify and order angles
- Recognise and describe 2-D shapes
- Triangles and quadrilaterals
- Horizontal and vertical
- Lines of symmetry
- Complete a symmetrical figure

Geometry: Position and Direction

- Describe a position
- Draw on a grid
- Move on a grid
- Describe movement on a grid

	Addition	Subtraction	Multiplication	Division												
Calculation Methods: Concrete Pictorial Abstract	<p>Column method regrouping Make both numbers on a place value grid.</p>  <p>146 + 527</p> <p>Add up the units and exchange 10 ones for one 10.</p>  <p>146 + 527</p> <hr/>  <p>7 1 5 1</p> <p>Start by partitioning the numbers before moving on to clearly show the exchange below the addition. This is expanded form:</p> $\begin{array}{r} 20 + 5 \\ 40 + 8 \\ 60 + 13 = 73 \end{array}$ <p>Moving onto the abstract of column addition with exchanges</p>	<p>Column method regrouping</p>  <p>Calculations $\begin{array}{r} 728 \\ - 582 \\ \hline 146 \end{array}$</p> <p>Draw the counters onto a place value grid and show what you have taken away by crossing the counters out as well as clearly showing the exchanges you make.</p>  <p>Moving onto the abstract of column subtraction with exchanges</p> 	<p>Grid Method Use base 10 – then, once secure, move on to place value counters to show how we are finding groups of a number.</p>  <p>Calculations 4×126</p>  <p>35 x 7</p> <table border="1" data-bbox="1321 630 1612 718"> <tr> <td>x</td> <td>30</td> <td>5</td> </tr> <tr> <td>7</td> <td>210</td> <td>35</td> </tr> </table> <p>210 + 35 = 245</p> <p>Bar modelling and number lines can support learners when solving problems with multiplication alongside the formal written methods. (Children need to understand multiplication as repeated addition to use bar modelling for problem solving).</p> <p>Moving onto the abstract of column multiplication Year 4 – two- and three-digit x 1 digit</p>	x	30	5	7	210	35	<p>Revisit concrete, pictorial, and abstract strategies from Year Three: Division with arrays Division with a remainder</p> <p>Short division</p> $96 \div 3$ <table border="1" data-bbox="1825 327 2049 486"> <thead> <tr> <th></th> <th>Tens</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3</td> <td>2</td> </tr> </tbody> </table> <p>Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.</p>  <p>Only for SEN children. Not practical for higher numbers. As soon as understood, move onto abstract.</p> <p>Moving onto the abstract of short division</p> $\begin{array}{r} 218 \\ 3 \overline{) 4872} \\ \underline{6} \\ 872 \\ \underline{6} \\ 26r2 \end{array}$		Tens	Units	3	3	2
	x	30	5													
7	210	35														
	Tens	Units														
3	3	2														
New Vocabulary for Y4	<p>Number and Place value: tenths, hundredths, numeral decimal places round (to nearest) thousand more / less negative integers count through zero roman numerals I to C</p> <p>Multiplication and Division: count in multiples of 6, 7, 9, 12, inverse, derive division facts</p> <p>Fractions: equivalent fractions and decimals, decimal point, decimal fraction hundredths</p> <p>Geometry (Position and Direction): co-ordinates translation, translate, quadrant x-axis, y-axis</p> <p>Geometry (Properties of Shape): area, net rectilinear adjacent quadrilaterals: (rhombus, parallelogram, trapezium, trapezoid, kite). heptagon, polygon, tetrahedron, polyhedron, cylindrical triangles (isosceles, scalene) right angle, acute angle, obtuse angles</p> <p>Measurement: convert, noon</p> <p>Statistics: continuous data, line graphs</p>															

<p>Continuous Curriculum (Maths Meetings)</p>	<p>Measurement: Length and Perimeter Equivalent lengths-m and cm, mm and cm; Kilometres; Add lengths; Subtract lengths; Measure perimeter; Perimeter on a grid; Perimeter of rectangles and rectilinear shapes</p> <p>Measurement: Area What is area?; Counting squares; Making shapes; Comparing area</p> <p>Number: Fractions Unit and non-unit fractions; Tenths –count in tenths; Equivalent fractions; Fractions greater than 1; Count in fractions; Add fractions; Add 2 or more fractions</p> <p>Number: Decimals Recognise tenths and hundredths; Tenths as decimals; Tenths on a place value grid and number line; Divide 1 then 2 digits by 10; Hundredths as decimals; Hundredths on a place value grid; Divide 1 or 2 digits by 100; Bonds to 10 and 100; Make a whole; Write, compare and order decimals; Round decimals; Halves and quarters</p> <p>Measurement: Money Pounds and pence; Ordering money; Estimating money; Convert pounds and pence; Add and subtract money; Find change; Four operations</p> <p>Measurement: Time Telling the time to 5 minutes; Telling the time to the minute; Using a.m. and p.m.; 24 hour clock; Hours, minute and seconds; Years, months, weeks and days; Analogue to digital-12 hour; Analogue to digital -24 hour</p> <p>Statistics Interpret charts; Comparison, sum and difference; Introduce line graphs</p> <p>Geometry: Position and Direction Describe a position; Draw on a grid; Move on a grid; Describe movement on a grid</p>					
<p>Arithmetic Fluency (Key Focus)</p>	<p>Counting Count in multiples of 6,7,9, 25 and 1000 Find 1000 more or less than a given number through zero to include negative numbers</p>	<p>Written (+ -) Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</p>	<p>Fractions and decimals Count up and down in hundredths Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten Written (+ -) Multiply two and three digit numbers by a one digit number using formal written layout</p>	<p>Number facts (x ÷) Recall multiplication and division facts for multiplication tables up to 12x12</p>	<p>Mental / Written (x ÷) 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</p>	<p>Fractions and decimals Add and subtract fractions with the same denominator 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</p>
<p>Consolidation (To be Included in Arithmetic Lessons)</p>	<p>Number: Fractions (Year 3, Spring 2 & Summer 1)</p>	<p>Number: Place Value (Year 4, Autumn 1)</p>	<p>Number: Addition and Subtraction (Year 4, Autumn 1)</p>	<p>Number: Multiplication and Division (Year 4, Autumn 2 & Spring 1)</p>	<p>Number: Multiplication and Division (Year 4, Autumn 2 & Spring 1)</p>	<p>Number: Fractions & Decimals (Year 4, Spring 2 & Summer 1)</p>
<p>Mental Maths</p>	<p>Number and Place Value (Securing Numbers, Ordering and Comparing): Count in 1s across boundaries 1000, 10,000, 100,000; Order a set of random numbers to 100,000; Compare numbers using symbols < and < up to 100,000</p> <p>Number and Place Value (Counting): Count in 10, 100s, 1000s forwards and backwards across boundaries 1000, 10,000, 100,000; What is 10, 100, 1000 more/less than?; Round any number to the nearest 10, 100 or 1000; Round decimals with one decimal place to the nearest whole number</p> <p>Addition and Subtraction (Multiples): Add any multiple of 10 to a 4-digit number <i>e.g., 2153 + 20, 2153 + 70</i> (regrouping); Add any multiple of 100 to a 4-digit number <i>e.g. 2153 + 100, 2153 + 300, 2153 + 900</i> (regrouping)</p> <p>Multiplication and Division (Doubling Numbers / Near Doubles): Near doubles to multiple of 10 <i>e.g., 60 + 59</i>; Double simple 3-digit numbers by recall of known facts or partitioning and recombining (multiples of 10, 50, 100) <i>e.g. double 200, double 250, double 220, half of 140.</i></p> <p>Multiplication and Division (Order of Operations): Multiplication and division of whole numbers by 10 and 100 and multiples of <i>e.g., 6 x 100, 10 x 100, 16 x 100, 16 x 300 etc</i>; Distributive law <i>e.g., 39 x 7 = 30 x 7 +</i></p>					

9 x 7; Associative law and reordering calculations to make it easier, expressing equal calculations e.g. $2 \times 6 \times 5 = 10 \times 6$; Multiply by 50 by multiply by 100 and halving e.g. $23 \times 50 = \text{half of } 23 \times 100$; Know all the table facts and the related division facts e.g. $500 \times 2 = 1000$, $1000 \div 2 = 500$, $250 \times 4 = 1000$, $1000 \div 4 = 250$, $200 \times 5 = 1000$, $1000 \div 5 = 200$; Know facts linked to measures e.g. $\pounds 5.00 \times 2 = \pounds 10.00$, $\pounds 500 \times 2 = \pounds 1000$, $\pounds 2.50 \times 4 = \pounds 10.00$, $\pounds 250 \times 4 = \pounds 1000$, $\pounds 2.00 \times 5 = \pounds 10.00$, $\pounds 200 \times 5 = \pounds 1000$ And corresponding division facts.

Multiplication and Division (Rounding and Adjusting): Rounding and adjusting decimals in context of money e.g. *3 items costing 99p or £1.99*

Fractions Decimals and Percentages (Comparing, Ordering and Calculating): Count up and down in hundredths; compare numbers with the same number of decimal places up to two decimal places; round decimals with one decimal place to the nearest whole number; recognise and write decimal equivalents of any number of tenths or hundredths, recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$

Multiplication Facts

Consolidate counting in multiples of x2 x5 x10 x11 x3 x4 x6 x7 x8 and introduce counting in multiples of x9
Consolidate counting in multiples of x2 x5 x10 x11 x3 x4 x6 x7 x8 x9 and introduce counting in multiples of x12
Revise all multiplication facts up to x12 x12
Revise all multiplication facts up to x12 x12
Recall all facts and related division facts

Number Talk

STEM sentences

I noticed that...
My first step...
The answer is...because...
I think...because...
...reminds me of ...
I predict that...
I know the problems is asking me to...
I can defend my answer by...
I agree/disagree with your answer because...
I want to add to what...said about...
Next time I solve a problem like this, I will



Maths Curriculum Map

Year 5



Autumn 1

Autumn 2

Spring 1

Spring 2

Summer 1

Summer 2

Core Curriculum

Number: Place Value

- 1000s,100s,10s and 1s
- Numbers to 10000
- Round to nearest 10,100 and 1000
- Numbers to 100000
- Compare and order numbers to 100000
- Round numbers within 100000
- Numbers to a million
- Counting in 10s,100s,1000s,10000s and 100000s
- Compare and order numbers to one million
- Round any number
- Round numbers to one million
- Negative numbers
- Roman numerals to 1000

Number: Addition and Subtraction

- Add up to 6-digit numbers-one exchange then more than one exchange
- Add whole numbers with more than 4 digits (column method)
- Subtract two 4-digit numbers-one exchanges then more than one exchange
- Round to estimate and approximate
- Inverse operations (addition and subtraction)

Number: Multiplication and Division

- Multiples and factors
- Common factors
- Prime numbers
- Square numbers and cube numbers
- Multiply by 10 and 100
- Multiply by 10,100 and 1000
- Divide by 10 and 100
- Divide by 10,100 and 1000
- Multiples of 10,100 and 1000

Measurement: Perimeter and Area

- Measure perimeter
- Perimeter on a grid
- Perimeter of rectangles and rectilinear shapes
- Calculate perimeter
- Counting squares
- Area of rectangles
- Area of compound shapes and irregular shapes
- Area of a triangle
- Area of a parallelogram

Number: Multiplication and Division

- Multiply 2 and 3 digits by 1 digit
- Multiply 4 digits by 1 digit
- Multiply 2 digits (area model)
- Multiply 2,3 and then 4 digits by 2 digits
- Short division
- Divide 2,3 then 4 digits by 1 digit
- Divide with remainders

Number: Fractions

- Equivalent fractions
- Fractions greater than 1
- Improper fractions to mixed numbers
- Mixed numbers to improper fractions
- Number sequences
- Compare and order fractions greater and less than 1
- Add and subtract fractions
- Add fractions within 1
- Add 3 or more fractions
- Add mixed numbers
- Subtract fractions and mixed numbers
- Subtract-breaking the whole
- Subtract 2 mixed numbers
- Multiply unit then non-unit fractions by an integer
- Calculate fractions of a quantity
- Fraction of an amount
- Using fractions as operators

Number: Decimals and Percentages

- Decimals up to 2 d.p.

Number: Decimals

- Adding and subtracting decimals within 1
- Complements to 1
- Adding decimals-crossing the whole
- Adding and subtracting decimals with the same number of decimal places
- Adding and subtracting decimals with a different number of decimal places
- Adding and subtracting wholes and decimals
- Decimal sequences
- Multiplying and dividing decimals by 10,100 and 1000

Geometry: Properties of Shape

- Identify, compare and order angles
- Measure angles in degrees
- Measure with a protractor
- Draw lines and angles accurately

Geometry: Position and Direction

- Describe position
- Draw on a grid
- Position in the first quadrant
- Translation
- Translation with coordinates
- Lines of symmetry
- Complete a symmetrical figure
- Reflection
- Reflection with coordinates

Measurement: Converting Units




- Kilograms and kilometres
- Millimetres and millilitres
- Metric units
- Imperial units
- Converting units of time
- Timetables

Measurement: Volume

- What is volume?
- Compare volume
- Estimate volume
- Estimate capacity

	<ul style="list-style-type: none"> Multi-step addition and subtraction problems 			<ul style="list-style-type: none"> Decimals as fractions Understand thousandths Thousandths = decimals Rounding decimals Order and compare decimals Understand percentages Percentages = fractions and decimals Equivalent F.D.P 	<ul style="list-style-type: none"> Calculate angles on a straight line and around a point Triangles and quadrilaterals Calculate length and angles in shapes Angles in regular and irregular polygons Reasoning about 3-D shapes Angles of a triangle Angles of a quadrilateral
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	Addition	Subtraction	Multiplication	Division
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<p>Calculation Methods: Concrete Pictorial Abstract</p>	<p><u>Column addition including the expanded form to develop reasoning skills</u></p> <p>Start by partitioning the numbers before moving on to clearly show the exchange below the addition.</p> <p>This is expanded form:</p> $\begin{array}{r} 20 + 5 \\ 40 + 8 \\ 60 + 13 = 73 \end{array}$ <p>As the children move on, introduce decimals with the same number of decimal places and different.</p>	<p><u>Expanded subtraction</u></p> <p>Use expanded and compact method</p>   <p>Moving forward the children use a more compact method. This will lead to an understanding of subtracting any number including decimals.</p> $\begin{array}{r} 5 \quad 12 \quad 1 \\ 2 \quad 6 \quad 3 \quad . \quad 0 \\ - \quad 2 \quad 6 \quad . \quad 5 \\ \hline 2 \quad 3 \quad 6 \quad . \quad 5 \end{array}$	<p><u>Column Multiplication</u></p> <p>Start with short multiplication</p> <p><u>Long Multiplication</u></p> <p>If it helps, children can write out what they are solving next to their answer.</p> $\begin{array}{r} 32 \\ \times 24 \\ \hline 120 \quad (4 \times 30) \\ 640 \quad (20 \times 30) \\ \hline 768 \end{array}$ $\begin{array}{r} 2 \quad 3 \quad 1 \\ 1342 \\ \times 18 \\ \hline 10736 \\ \hline 24156 \end{array}$	<p><u>Short Division</u></p> $\begin{array}{r} 8 \quad 6 \quad r \quad 2 \\ 3 \overline{) 5432} \\ \underline{54} \\ 0 \\ \underline{0} \\ 0 \\ \underline{0} \\ 0 \\ \underline{0} \\ 0 \end{array}$ <p>Move into decimal places to divide the total accurately</p> $\begin{array}{r} 1 \quad 4 \quad . \quad 6 \\ 3 \quad 5 \overline{) 511.0} \\ \underline{35} \\ 16 \\ \underline{15} \\ 11 \\ \underline{10} \\ 10 \\ \underline{9} \\ 10 \\ \underline{9} \\ 10 \\ \underline{9} \\ 10 \\ \underline{9} \\ 10 \end{array}$ <p><u>Long Division</u></p> <p>Children apply their learning of short division and write the groups underneath to use column subtraction to calculate a remainder. The next digit then meets the remainder rather than carrying the remainder over. For decimal long division, add the decimal point before solving the calculation.</p> 
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<p>New Vocabulary for Y5</p>	<p>Number and Place Value: powers of 10 numbers to 1,000,000 roman numerals I to M</p> <p>Multiplication and Division: count in multiples for all tables up to 12x12 factor pairs composite numbers, prime numbers, prime factors, square number, cubed number</p> <p>Fractions: proper fractions, improper fractions, mixed numbers percentage</p> <p>Measurement: volume, concave, convex breadth imperial units/metric units inches, pounds, pints, currency, ounce, tonne</p> <p>Geometry (Properties of Shape): reflex angles dimensions regular/irregular polygons, octahedron</p> <p>Statistics: average</p>					
<p>Continuous Curriculum (Maths Meetings)</p>	<p>Statistics Interpret charts; Comparison, sum and difference; Read and interpret line graphs; Draw line graphs; Use line graphs to solve problems; Read and interpret tables; Two-way tables; Timetables, Mean</p> <p>Number: Fractions, Decimals & Percentages Equivalent fractions; Fractions greater than 1; Improper fractions to mixed numbers; Mixed numbers to improper fractions; Number sequences; Compare and order fractions greater and less than 1; Add and subtract fractions; Add fractions within 1; Add 3 or more fractions; Add mixed numbers; Subtract fractions and mixed numbers; Subtract-breaking the whole; Subtract 2 mixed numbers; Multiply unit then non-unit fractions by an integer; Calculate fractions of a quantity; Fraction of an amount; Using fractions as operators; Decimals up to 2 d.p.; Decimals as fractions; Understand thousandths; Thousandths as decimals; Rounding decimals; Order and compare decimals; Adding and subtracting decimals within 1; Complements to 1; Adding decimals-crossing the whole; Adding and subtracting decimals with the same number of decimal places; Adding and subtracting decimals with a different number of decimal places; Adding and subtracting wholes and decimals; Decimal sequences; Multiplying and dividing decimals by 10,100 and 1000; Understand percentages; Percentages as fractions and decimals; Equivalent F.D.P</p> <p>Geometry: Properties of Shape Identify, compare and order angles; Measure angles in degrees; Measure with a protractor; Draw lines and angles accurately; Calculate angles on a straight line and around a point; Triangles and quadrilaterals; Calculate length and angles in shapes; Regular and irregular polygons; Reasoning about 3-D shapes</p> <p>Geometry: Position and Direction Describe position; Draw on a grid; Position in the first quadrant; Translation; Translation with coordinates; Lines of symmetry; Complete a symmetrical figure; Reflection; Reflection with coordinates</p> <p>Measurement: Converting Units Kilograms and kilometres; Millimetres and millilitres; Metric units; Imperial units; Converting units of time; Timetables</p> <p>Measurement: Volume What is volume?; Compare volume; Estimate volume; Estimate capacity</p>					
<p>Arithmetic Fluency (Key Focus)</p>	<p>Counting Count forwards and backwards in steps of powers of 10 for any given number up to 100000-interpret negative numbers in context Count forwards and backwards with positive and negative whole numbers, including through zero</p>	<p>Number facts (+ -) 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 numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19</p>	<p>Mental (+ -) Add and subtract numbers mentally with increasing accuracy Written (+ -) Add and subtract whole numbers with more than 4 digits, including using formal written methods Add and subtract square and cubed numbers</p>	<p>Fractions and decimals Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements>1 as a mixed number Add and subtract mixed numbers Add and subtract improper fractions Multiply proper fractions and mixed numbers</p>	<p>Mental Multiply and divide numbers mentally drawing upon known facts Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</p>	<p>Written (x ÷) Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for two digit numbers Divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for the context</p>
<p>Consolidation (To be Included in Arithmetic Lessons)</p>	<p>Number: Fractions & Decimals (Year 4, Spring 2 & Summer 1)</p>	<p>Number: Place Value (Year 5, Autumn 1)</p>	<p>Number: Addition and Subtraction (Year 5, Autumn 1)</p>	<p>Number: Multiplication and Division (Year 5, Autumn 2 & Spring 1)</p>	<p>Number: Fractions, Decimals and Percentages (Year 5, Spring 2)</p>	<p>Number: Fractions, Decimals and Percentages (Year 5, Spring 2)</p>

<p>Mental Maths</p>	<p>Number and Place Value (Securing Numbers, Ordering and Comparing): Count in 1s forwards and backwards across boundaries 1000, 10,000, 100,000, 1 000, 000; Read, write, order and compare numbers to at least 1,000,000 and determine the values of each digit <i>e.g.</i>, <i>What is the value of the 6 in 681,927?</i></p> <p>Number and Place Value (Counting): Count in 10, 100s, 1000s forwards and backwards across boundaries 1000, 10,000, 100,000, 1 000, 000; What is 10, 100, 1000 more/less than ...? Counting forwards and backwards in powers of 10 from any given number up to 1,000,000 <i>e.g.</i> 30, 60, 90 etc; count in 10,000s from 329,109; round any number up to 1 000 000 to the nearest 10, 100, 1000, 10000 and 100 000; round decimals with two decimal places to the nearest whole number and to one decimal place; Interpret negative numbers in context, count forwards and backwards with + and – numbers including zero <i>e.g.</i> continue the sequence -7, -14, -21 etc</p> <p>Addition and Subtraction (Multiples): Add any multiple of 10/100 to a 4 digit number <i>e.g.</i> 2153 + 110, 2153 + 330, 2153 + 350, 2153 + 910, 2153 + 950; Add and subtract numbers mentally with increasingly large numbers <i>e.g.</i> what is 12,463 – 23,000?</p> <p>Multiplication and Division (Doubling Numbers / Near Doubles): Near doubles to multiples of 10 or 100 <i>e.g.</i> 198+198; Double simple 3/4 digit numbers by recall of known facts or partitioning and recombining (multiples of 10, 50, 100) <i>e.g.</i> double 200, double 250, double 220, half of 140; Double decimals to 1/2dp <i>e.g.</i> 0.3 x 2 (no regrouping), 0.6 + 0.6 or 0.6 x 2 (regrouping) Near doubles 0.16 + 0.17 or 0.16 x 2 Focus on regrouping after not regrouping</p> <p>Multiplication and Division (Order of Operations): Multiplication and division of whole numbers by 10 and 100 and 1000; Use partitioning and recombining to calculate mentally <i>e.g.</i> 14 x 1000, 14 x 1200; Use cubed and squared to express calculations <i>e.g.</i> 3 x 3 x 5 = 3² x 5; Multiply pairs of multiples of 10 and 100. <i>e.g.</i> 20 x 300</p> <p>Multiplication and Division (Rounding and Adjusting): Rounding and adjusting, Multiply by 10, 100 and 1000 and adjust <i>e.g.</i> 99 x 15; Use 100 x 15; Use arrays to show how to adjust.</p> <p>Fractions Decimals and Percentages (Comparing, Ordering and Calculating): compare and order fractions whose denominators are all multiples of the same number; read, write, order and compare numbers with up to three decimal places; round decimals with two decimal places to the nearest whole number and to one decimal place; read and write decimal numbers as fractions (<i>e.g.</i> 0.71 = $\frac{71}{100}$); write percentages as a fraction with denominator 100 as a decimal fraction</p>
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<p>Multiplication and division facts Recall all multiplicative facts and related division facts including, missing numbers and decimals.</p>	<p>Number Talk/STEM sentences</p> <ul style="list-style-type: none"> I noticed that... My first step... The answer is...because... I think...because... ...reminds me of ... I predict that... I know the problems is asking me to... I can defend my answer by... I agree/disagree with your answer because... I want to add to what...said about... Next time I solve a problem like this, I will... My strategy is the same/different to yours because... I still have a question about... The most efficient strategy would be...
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Maths Curriculum Map

Year 6



Autumn 1

Autumn 2

Spring 1

Spring 2

Summer 1

Summer 2

Core Curriculum

Number: Place Value

- Numbers to 10000 and 100000
- Numbers to a million and ten million
- Compare and order any number
- Negative numbers

Number: Addition and Subtraction, Multiplication and Division

- Inverse operations (addition and subtraction)
- Multi-step addition and subtraction problems
- Multiply 2 digits (area model)
- Multiply 2 and 3 digits by 2 digits
- Multiply a 4 digit number by a 2 digit number
- Division using factors
- Long division
- Common factors and multiples
- Order of operations
- Mental calculations and estimation
- Reason from known facts

Number: Fractions

- Equivalent fractions
- Simplify fractions
- Improper fractions to mixed numbers
- Fractions on a number line
- Compare and order (numerator, denominator)
- Add mixed numbers
- Subtract mixed numbers
- multiply fractions by integers
- multiply integers by fractions
- divide fractions by integers
- four rules with fractions

Number: Ratio

- Using ratio language
- Ratio and fractions
- Introduce the ratio symbol
- Using scale factors
- Calculate scale factors
- Ratio and proportion problems

Number: Decimals

- Decimals up to 2 decimal places
- Understand thousandths
- Three decimal places
- Multiply and divide decimals by integers
- Division to solve problems
- Decimals as fractions
- Fractions to decimals

Number: Percentages

- Understand percentages
- Fractions to percentages
- Equivalent FDP
- Order FDP
- Percentage of an amount
- Percentages-missing values

Number: Algebra

- Find a rule-one step then two step
- Forming expressions
- Substitution
- Formulae
- Forming equations
- Solve simple one-step equations
- Solve two-step equations
- Find pairs of values
- Enumerate possibilities

Measurement: Converting Units

- Metric measures
- Convert metric measures
- Calculate with metric measures
- Miles and kilometres
- Imperial measures
- Time problems

Geometry: Properties of Shape

- Vertically opposite angles
- Angles in special quadrilaterals
- Draw shapes accurately
- Draw nets of 3-D shapes
- Properties of circles

Statistics

- Read and interpret pie charts
- Pie charts with percentages
- Draw pie charts

Financial Literacy: Introduction to banking

<https://www.bankofengland.co.uk/education/education-resources/money-and-me>

What banks are and how they make money

What is the Bank of England?

Why do prices change over time?

Exploring supply and demand and their impact on price changes

Why is money so important?

Exploring money decisions and their impact

Teaching how to successfully budget

How can I keep my money safe?

Understanding how to avoid scams

What is debt?

Understanding debt in all its forms

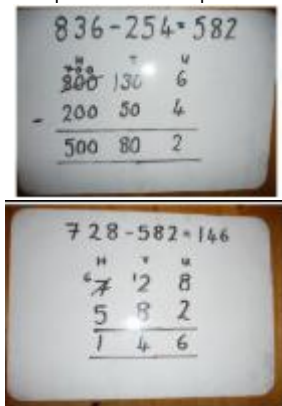

Explaining the importance of ethical spending

Financial Literacy: Living with Money

Children will learn about the following:

- Mortgages
- Rent
- Further Education Fees
- Food Costs
- Energy Costs
- Other Household Bills
- Taxes
- Wages
- Government Charges
- Pensions
- NI Contributions

Pupils will complete scenario based, real world, maths tasks.

	Addition	Subtraction	Multiplication	Division
Calculation Methods: Concrete Pictorial Abstract	<p><u>Column addition including the expanded form to develop reasoning skills</u></p> <p>Start by partitioning the numbers before moving on to clearly show the exchange below the addition. This is expanded form: $\begin{array}{r} 20 + 5 \\ 40 + 8 \\ 60 + 13 = 73 \end{array}$</p> <p>As the children move on, introduce decimals with the same number of decimal places and different.</p>	<p><u>Expanded subtraction</u></p> <p>Use expanded and compact method</p>  <p>Moving forward the children use a more compact method. This will lead to an understanding of subtracting any number including decimals.</p> $\begin{array}{r} 5 \quad 12 \quad 1 \\ 2 \quad 6 \quad 3 \quad . \quad 0 \\ - 2 \quad 6 \quad . \quad 5 \\ \hline 2 \quad 3 \quad 6 \quad . \quad 5 \end{array}$	<p><u>Column Multiplication</u></p> <p>Start with short multiplication</p> <p><u>Long Multiplication</u></p> <p>If it helps, children can write out what they are solving next to their answer.</p> $\begin{array}{r} 32 \\ \times 24 \\ \hline 128 \\ 640 \\ \hline 768 \end{array}$ $\begin{array}{r} 1342 \\ \times 18 \\ \hline 10736 \\ 13420 \\ \hline 24156 \end{array}$	<p><u>Short Division</u></p> $\begin{array}{r} 86 \text{ r } 2 \\ 3 \overline{) 5432} \\ \underline{15} \\ 19 \\ \underline{18} \\ 12 \\ \underline{12} \\ 0 \end{array}$ <p>Move into decimal places to divide the total accurately</p> $\begin{array}{r} 14.6 \\ 35 \overline{) 511.0} \\ \underline{35} \\ 16 \\ \underline{14} \\ 21 \\ \underline{21} \\ 0 \end{array}$ <p><u>Long Division</u></p> <p>Children apply their learning of short division and write the groups underneath to use column subtraction to calculate a remainder. The next digit then meets the remainder rather than carrying the remainder over. For decimal long division, add the decimal point before solving the calculation.</p> 
New Vocabulary for Y6	<p>Number and Place Value: numbers to 10,000,000</p> <p>Addition and Subtraction: order of operations</p> <p>Multiplication and Division: order of operations, common factors, common multiples, factorise</p> <p>Fractions: degree of accuracy, simplify</p> <p>Algebra: algebra, algebraically express ratio proportion linear number of sequence substitute, variables, symbol, known values</p> <p>Geometry (Position and Direction): Four quadrants</p> <p>Geometry (Properties of Shape): circumference, radius, diameter, arc, congruent, dodecahedron</p> <p>Statistics: mean, median, range pie chart construct</p>			
Continuous Curriculum	<p>Number: Fractions Equivalent fractions; Simplify fractions; Improper fractions to mixed numbers; Mixed numbers to improper fractions; Fractions on a number line; Compare and order (numerator, denominator); Add and subtract fractions; Add mixed numbers; Subtract mixed numbers; Subtract fractions; Mixed addition and subtraction; Multiply fractions by integers; Multiply integers by fractions; Divide fractions by integers; Four rules with fractions; Fractions of an amount-find the whole</p>			

<p>(Maths Meetings)</p>	<p>Place Value Round numbers to 10,100 and 1000, round any number</p> <p>Geometry: Position and Direction The first quadrant; Four quadrants; Translations; Reflections</p> <p>Number: Decimals Decimals up to 2 decimal places; Understand thousandths; Three decimal places; Multiply and divide by 10,100 and 1000; Multiply and divide decimals by integers; Division to solve problems; Decimals as fractions; Fractions to decimals</p> <p>Number: Percentages Understand percentages; Fractions to percentages; Equivalent FDP; Order FDP</p> <p>Measurement: Converting Units Metric measures; Convert metric measures; Calculate with metric measures; Miles and kilometres; Imperial measures</p> <p>Measurement: Perimeter, Area and Volume Shapes-same area; Area and perimeter; Area of a triangle, Angles in a triangle, Area of a parallelogram; Volume-counting cubes; Volume of a cuboid, Volume of a cuboid</p> <p>Number: Ratio Using ratio language; Ratio and fractions; Introduce the ratio symbol; Using scale factors; Calculate scale factors; Ratio and proportion problems</p> <p>Geometry: Properties of Shape Measure with a protractor; Draw lines and angles accurately; Angles on a straight line and around a point; Calculate angles; Vertically opposite angles; Angles in a triangle (special and missing); Angles in special quadrilaterals; Angles in regular polygons; Draw shapes accurately; Draw nets of 3-D shapes</p> <p>Statistics Read and interpret line graphs; Draw line graphs; Use line graphs to solve problems; Circles; Read and interpret pie charts; Pie charts with percentages; Draw pie charts; The mean</p>					
<p>Arithmetic Fluency (Key Focus)</p>	<p>Counting Use negative numbers in context and calculate intervals across zero</p> <p>Written (+ -) Multiply multi-digit numbers up to 4 digits by a two digit whole number using the formal written method of long multiplication</p>	<p>Number facts (+ -) Identify common factors, common multiples and prime numbers</p> <p>Written (+ -) 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 context</p>	<p>Mental (+ -) Perform mental calculations including with mixed operations</p> <p>Written (+ -) Divide numbers up to 4 digits by a two digit whole number using the formal method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</p>	<p>Fractions and decimals Divide proper fractions by whole numbers</p> <p>Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to 3 decimal places</p>	<p>Fractions and decimals Multiply one digit numbers with up to 2 decimal places by whole numbers</p>	<p>Mental Perform mental calculations, including with mixed operations and large numbers</p>
<p>Consolidation (To be Included in Arithmetic Lessons)</p>	<p>Number: Decimals (Year 5, Summer 1)</p> <p>Add and subtract whole numbers with more than 4 digits (Year 5 Autumn 1)</p>	<p>Number: Place Value (Year 6, Autumn 1)</p>	<p>Number: Addition and Subtraction, Multiplication and Division (Year 6, Autumn 1)</p> <p>Multiply 4 digits by 1 digit (Year 5 Spring 1)</p> <p>Primes to 100, Squares and cubes (Year 5 Autumn 2)</p>	<p>Number: Fractions, Decimals and Percentages (Year 6, Autumn 2 & Spring 1)</p>	<p>Number: Addition and Subtraction, Multiplication and Division (Year 6, Autumn 1)</p>	<p>Number: Fractions, Decimals and Percentages (Year 6, Autumn 2 & Spring 1)</p>
<p>Mental Maths</p>	<p>Number and Place Value (Securing Numbers, Ordering and Comparing): Count in 1s forwards and backwards across boundaries 1000, 10,000, 100,000, 1000, 000+; Read, write, order and compare numbers to at least 10,000,000 and determine the values of each digit <i>e.g. what is the value of 8 in 8,239,146?</i></p> <p>Number and Place Value (Counting): Count in 10, 100s, 1000, 10,000s forwards and backwards across boundaries 100,000, 1000, 000+; What is 10, 100, 1000/10000 more/less than? <i>e.g. 1 million – 1 1 million – 5 etc</i>; What is 0.1, 0.01 more than/less than?; Round any whole number to a required degree of accuracy <i>e.g. round 3,819,278 to nearest million</i>; round any whole number or decimal to a required degree of accuracy; Use negative numbers in context and calculate intervals across zero <i>e.g. What is difference between -37.4°C and 29.8 °C</i></p> <p>Addition and Subtraction (Multiples): Perform mental calculations, including with mixed operations and large numbers <i>e.g. 700,000 - 904</i>; Use knowledge of the order of operations to carry out calculations involving the four operations <i>e.g. what is 2 + 7 x 6?</i>; Solve addition and subtractions multi-step problems in contexts, deciding which operations and methods to use and why <i>e.g. How much change from £10 if you spend £1.45 and then £2.57?</i>; Perform mental calculations, including with mixed operations and large numbers <i>e.g. 7000 x 0.9</i></p>					

Multiplication and Division (Doubling Numbers / Near Doubles): Double decimals to 1dp e.g. 0.3×2 (no regrouping), $0.6 + 0.6$ or 0.6×2 (regrouping) Near doubles e.g. $0.16 + 0.17$ or 0.16×2 ; Focus on regrouping after not regrouping

Multiplication and Division (Order of Operations): Multiply and divide decimals using knowledge of place value e.g. 3×0.5 , 15×0.6 ; Revisit mental skills of partitioning and recombining and using place value. Perform mental calculations, including with mixed operations and large numbers e.g., 7000×0.9 ; BIDMAS

Multiplication and Division (Rounding and Adjusting): 999×16 , 1000×16 and adjust, 101×16 ; Explore efficiency of methods e.g. 20×399 , $20 \times (400 - 20)$; Multiply decimals e.g. 0.99×16

Fractions Decimals and Percentages (Comparing, Ordering and Calculating): Compare and order fractions including those >1 ; e.g. enter the correct sign between the fractions ($<$ or $>$ or $=$) $14/6$ $139/48$; Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions e.g. $1 \frac{3}{4} + 2 \frac{1}{2}$; Multiply simple pairs of proper fractions e.g. $\frac{3}{4} \times \frac{2}{5}$; Divide proper fractions by whole numbers e.g. $1/3 \div 2$; Identify the value of each digit in numbers given to 3DP; \times and \div numbers by 10, 100 and 1000 giving answers up to 3DP; e.g. $47 \div 1000$; Multiply 1 digit number with up to 2DP by whole numbers e.g. 0.09×12 ; Recall and use equivalences between F D and P e.g. 78% as a fraction; associate a fraction with division and calculate decimal fraction equivalents e.g. 0.375 for a simple fraction ($3/8$)

Multiplication and Division Facts

Recall all multiplicative facts and related division facts including, missing numbers and decimals.

Number Talk

STEM sentences

I noticed that...

My first step...

The answer is...because...

I think...because...

...reminds me of ...

I predict that...

I know the problems is asking me to...

I can defend my answer by...

I agree/disagree with your answer because...

I want to add to what...said about...

Next time I solve a problem like this, I will...

My strategy is the same/different to yours because...

I still have a question about...

The most efficient strategy would be...