

# A -CLIC Nursery Term 1

Amounts		Steps
1	Amounts Exist	✓
2	Amounts Compared - 1	1
3	Amounts Are Needed	1 - 3
4	Amounts Change	1 - 4
5	Amounts Compared - 2	
6	Amounts Compared - 3	
7	Amounts Compared by Counting	
8	No Amount	1 - 2

C	
Counting	
1	Saying Numbers
2	Reading Numbers
3	Counting Skills
4	Actual Counting
5	Ordering Numbers
6	Counting Multiples
7	Squiggleworth



	Learn Its	Steps
1	My First Flashcards	1 - 5
2	My Body Learn Its	1
3	My 'Finger Double' Learn Its	
4	My Halving Learn Its	
5	Double Facts	
6	My First Number Sentences	
7	Number Buddy (Bonds to 10)	
8	'Add on 2' Learn Its	
9	'Add on 3' Learn Its	
10	Single Digit Doubles	

	INN	Steps
1	Pim is Counting	
2	Pim Knows His Learn Its	
3	Pim Swaps Amounts	1
4	Doubling Amounts	
5	Halving Amounts	
6	Who Won?	
7	Little Jigsaws	
8	Fact Families	

Calculation	Steps
Addition	
Subtraction	
Multiplication	
Division	

## Counting (in detail)

1. Saying Numbers		Steps
1	1 to 10	1
2	11 to 20	
3	1 to 100 Skills	
4	1 to 100 I'm Ready	
5	Counting Past 100 Skills	
6	Counting Past 100 I'm Ready	
7	Counting Backwards	

2. Reading Numbers		Steps
1	1 to 10	1
2	11 to 20	
3	1 to 100 Skills	
4	1 to 100 I'm Ready	
5	Counting past 100 Skills	

3. Counting Skills		Steps
1	When to Count	
2	Last Number is the Total	
3	1 to 1 Correspondence	1

4. Actual Counting		Steps
1	1 to 10	
2	1 to 20 & From a Pile	

5. Ordering Numbers		Steps
1	1 to 10	
2	Different Amounts & 1 to 20	
3	2 Digit Numbers 2 Options	
4	2 Digit Numbers 3 Options	

6. Counting Multiples		Steps
1	Multiples of 10	
2	Multiples of 5	
3	Multiples of 2	

  

7. Squiggleworth		Steps
1	2 Digit Numbers	

# A -CLIC Nursery Term 2

Amounts		Steps
1	Amounts Exist	✓
2	Amounts Compared - 1	2 - 3
3	Amounts Are Needed	4
4	Amounts Change	5
5	Amounts Compared - 2	1 - 2
6	Amounts Compared - 3	1 - 2
7	Amounts Compared by Counting	
8	No Amount	2

C	
Counting	
1	Saying Numbers
2	Reading Numbers
3	Counting Skills
4	Actual Counting
5	Ordering Numbers
6	Counting Multiples
7	Squiggleworth



Learn Its		Steps
1	My First Flashcards	✓
2	My Body Learn Its	2
3	My 'Finger Double' Learn Its	
4	My Halving Learn Its	
5	Double Facts	
6	My First Number Sentences	
7	Number Buddy (Bonds to 10)	
8	'Add on 2' Learn Its	
9	'Add on 3' Learn Its	
10	Single Digit Doubles	

	INN	Steps
1	Pim is Counting	
2	Pim Knows His Learn Its	
3	Pim Swaps Amounts	1
4	Doubling Amounts	
5	Halving Amounts	
6	Who Won?	
7	Little Jigsaws	
8	Fact Families	

Calculation	Steps
Addition	
Subtraction	
Multiplication	
Division	

## Counting (in detail)

1. Saying Numbers		Step
1	1 to 10	2
2	11 to 20	
3	1 to 100 Skills	
4	1 to 100 I'm Ready	
5	Counting Past 100 Skills	
6	Counting Past 100 I'm Ready	
7	Counting Backwards	

2. Reading Numbers	Steps
1	1 to 10
2	11 to 20
3	1 to 100 Skills
4	1 to 100 I'm Ready
5	Counting past 100 Skills

3. Counting Skills		Steps
1	When to Count	1 - 2
2	Last Number is the Total	
3	1 to 1 Correspondence	2 - 4

4. Actual Counting		Steps
1	1 to 10	
2	1 to 20 & From a Pile	

5. Ordering Numbers		Steps
1	1 to 10	
2	Different Amounts & 1 to 20	
3	2 Digit Numbers 2 Options	
4	2 Digit Numbers 3 Options	

<b>6. Counting Multiples</b>	<b>Steps</b>
1 Multiples of 10	
2 Multiples of 5	
3 Multiples of 2	

  

<b>7. Squiggleworth</b>	<b>Steps</b>
1 2 Digit Numbers	

# A -CLIC Nursery Term 3

## Amounts

Amounts	Steps
1 Amounts Exist	✓
2 Amounts Compared - 1	4 - 5
3 Amounts Are Needed	5
4 Amounts Change	✓
5 Amounts Compared - 2	3 - 4
6 Amounts Compared - 3	3 - 4
7 Amounts Compared by Counting	
8 No Amount	2

## C

Counting	
1	Saying Numbers
2	Reading Numbers
3	Counting Skills
4	Actual Counting
5	Ordering Numbers
6	Counting Multiples
7	Squiggleworth



## L

Learn Its	Steps
1 My First Flashcards	✓
2 My Body Learn Its	3
3 My 'Finger Double' Learn Its	
4 My Halving Learn Its	
5 Double Facts	
6 My First Number Sentences	
7 Number Buddy (Bonds to 10)	
8 'Add on 2' Learn Its	
9 'Add on 3' Learn Its	
10 Single Digit Doubles	

## I

INN	Steps
1 Pim is Counting	1
2 Pim Knows His Learn Its	
3 Pim Swaps Amounts	1
4 Doubling Amounts	
5 Halving Amounts	
6 Who Won?	
7 Little Jigsaws	
8 Fact Families	

## G

Calculation	Steps
Addition	
Subtraction	
Multiplication	
Division	

## Counting (in detail)

1. Saying Numbers	Steps
1 1to10	3
2 11to20	
3 1to100 Skills	
4 1to100 I'm Ready	
5 Counting Past 100 Skills	
6 Counting Past 100 I'm Ready	
7 Counting Backwards	

2. Reading Numbers	Steps
1 1 to 10	2
2 11 to 20	
3 1 to 100 Skills	
4 1 to 100 I'm Ready	
5 Counting past 100 Skills	

3. Counting Skills	Steps
1 When to Count	3 - 5
2 Last Number is the Total	1 - 3
3 1 to 1 Correspondence	5

4. Actual Counting	Steps
1 1 to 10	
2 1 to 20 & From a Pile	

5. Ordering Numbers	Steps
1 1 to 10	
2 Different Amounts & 1 to 20	
3 2 Digit Numbers 2 Options	
4 2 Digit Numbers 3 Options	

6. Counting Multiples	Steps
1 Multiples of 10	
2 Multiples of 5	
3 Multiples of 2	

7. Squiggleworth	Steps
1 2 Digit Numbers	

# YR MATHS OVERVIEW EYFS

	Wk 1 (half week)	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8
Autumn I	GETTING TO KNOW YOU			JUST LIKE ME!			CONSOLIDATION	
Autumn II	IT'S ME 1, 2, 3!			LIGHT AND DARK			Complete formative Assessments	
Spring I	ALIVE IN FIVE!			GROWING 6, 7, 8				
Spring II	BUILDING 9 AND 10			CONSOLIDATION				
Summer I	TO 20 AND BEYOND			FIRST THEN AND NOW			CONSOLIDATION	
Summer II	FIND MY PATTERN			ON THE MOVE			Complete formative Assessments	

# A -CLIC Reception Term 1

**WHITE ROSE RESOURCES** to support planning and teaching of key objectives

# A -CLIC Reception Term 2

## A-CLIC Framework - Reception Term 2

### Amounts

	Amounts	Steps
1	Amounts Exist	✓
2	Amounts Compared - 1	✓
3	Amounts Are Needed	✓
4	Amounts Change	✓
5	Amounts Compared - 2	✓
6	Amounts Compared - 3	✓
7	Amounts Compared by Counting	
8	No Amount	2

### C

Counting	
1	Saying Numbers
2	Reading Numbers
3	Counting Skills
4	Actual Counting
5	Ordering Numbers
6	Counting Multiples
7	Squiggleworth

### L

	Learn Its	Steps
1	My First Flashcards	✓
2	My Body Learn Its	5
3	My 'Finger Double' Learn Its	3 - 5
4	My Halving Learn Its	3 - 5
5	Double Facts	3 - 5
6	My First Number Sentences	
7	Number Buddy (Bonds to 10)	
8	'Add on 2' Learn Its	
9	'Add on 3' Learn Its	
10	Single Digit Doubles	

### I

	INN	Steps
1	Pim is Counting	1
2	Pim Knows His Learn Its	
3	Pim Swaps Amounts	1
4	Doubling Amounts	
5	Halving Amounts	
6	Who Won?	
7	Little Jigsaws	
8	Fact Families	1 - 3

### C

	Calculation	Steps
	Addition	1 - 6
	Subtraction	1 - 6
	Multiplication	
	Division	1

### Counting (in detail)

	1. Saying Numbers	Steps
1	1 to 10	✓
2	11 to 20	1 - 2
3	1 to 100 Skills	1
4	1 to 100 I'm Ready	
5	Counting Past 100 Skills	
6	Counting Past 100 I'm Ready	
7	Counting Backwards	

	2. Reading Numbers	Steps
1	1 to 10	5
2	11 to 20	
3	1 to 100 Skills	
4	1 to 100 I'm Ready	
5	Counting past 100 Skills	

	3. Counting Skills	Steps
1	When to Count	✓
2	Last Number is the Total	✓
3	1 to 100 Skills	
4	1 to 100 I'm Ready	
5	Correspondence	✓

	4. Actual Counting	Steps
1	1 to 10	2 - 5
2	1 to 20 & From a Pile	

	5. Ordering Numbers	Steps
1	1 to 10	1 - 5
2	Different Amounts & 1 to 20	
3	2 Digit Numbers 2 Options	
4	2 Digit Numbers 3 Options	

	6. Counting Multiples	Steps
1	Multiples of 10	1 - 3
2	Multiples of 5	
3	Multiples of 2	

	7. Squiggleworth	Steps
1	2 Digit Numbers	

# A -CLIC Reception Term 3

### Amounts

	Amounts	Steps
1	Amounts Exist	✓
2	Amounts Compared - 1	✓
3	Amounts Are Needed	✓
4	Amounts Change	✓
5	Amounts Compared - 2	✓
6	Amounts Compared - 3	✓
7	Amounts Compared by Counting	1 - 5
8	No Amount	3 - 5

### C

	Counting
1	Saying Numbers
2	Reading Numbers
3	Counting Skills
4	Actual Counting
5	Ordering Numbers
6	Counting Multiples
7	Squiggleworth

### L

	Learn Its	Steps
1	My First Flashcards	✓
2	My Body Learn Its	✓
3	My 'Finger Double' Learn Its	✓
4	My Halving Learn Its	✓
5	Double Facts	✓
6	My First Number Sentences	1 - 2
7	Number Buddy (Bonds to 10)	
8	'Add on 2' Learn Its	
9	'Add on 3' Learn Its	
10	Single Digit Doubles	

### I

	INN	Steps
1	Pim is Counting	2 - 4
2	Pim Knows His Learn Its	1
3	Pim Swaps Amounts	2
4	Doubling Amounts	1
5	Halving Amounts	1
6	Who Won?	1 - 2
7	Little Jigsaws	
8	Fact Families	4

### C

	Calculation	Steps
	Addition	7 - 12
	Subtraction	7 - 9
	Multiplication	1 - 2
	Division	2 - 5

### Counting (in detail)

	1. Saying Numbers	Steps
1	1 to 10	✓
2	11 to 20	3 - 5
3	1 to 100 Skills	1
4	1 to 100 I'm Ready	1
5	Counting Past 100 Skills	
6	Counting Past 100 I'm Ready	
7	Counting Backwards	2

	2. Reading Numbers	Steps
1	1 to 10	✓
2	11 to 20	1 - 5
3	1 to 100 Skills	
4	1 to 100 I'm Ready	
5	Counting past 100 Skills	

	3. Counting Skills	Steps
1	When to Count	✓
2	Last Number is the Total	✓
3	1 to 100 Skills	
4	1 to 100 I'm Ready	
5	Correspondence	✓

	4. Actual Counting	Steps
1	1 to 10	✓
2	1 to 20 & From a Pile	1 - 5

	5. Ordering Numbers	Steps
1	1 to 10	✓
2	Different Amounts & 1 to 20	5
3	2 Digit Numbers 2 Options	
4	2 Digit Numbers 3 Options	

	6. Counting Multiples	Steps
1	Multiples of 10	4 - 5
2	Multiples of 5	1 - 2
3	Multiples of 2	1 - 2

	7. Squiggleworth	Steps
1	2 Digit Numbers	

<b>LEARN Its YR  CLIC BM 1 2 3 <b>Counting to 10</b></b>	<b>Autumn Term Challenge 1 LEARN ITS Steps 1 (20 secs)</b>	<b>Spring Term Challenge 2 LEARN ITS Steps 1,2 (20 secs)</b>	<b>Summer Term Challenge 3 LEARN ITS Steps 1,2,3 (20 secs)</b>
	<b>Step 1</b> <b>Addition:</b> Finger doubles (and halves) $1+1, 2+2$	<b>Step 2</b> <b>Addition:</b> Finger doubles (and halves) $3+3, 4+4, 5+5,$	<b>Step 3</b> <b>Addition</b> Add on 1; Add on 3 $2+1, 2+3$ <b>Multiplication:</b> $\times 10$ multiples Say multiples 1–5 Say multiples 1–10

# Y1 MATHS OVERVIEW

	Wk 1 (half week)	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8
Autumn I	Number: Place Value (within 10)			Number: Addition and Subtraction				
Autumn II	Number: Addition and Subtraction		Geometry: Shape	Number: Place Value (within 20)			Complete unit Assessments	
Spring I	Number: Addition & Subtraction (within 20)			Number: Place Value (within 50) Multiples of 2, 5 and 10 to be included				
Spring II	Measurement: Length and Height			Measurement: weight and volume	MID YEAR ASSESSMENT			
Summer I	Number: Multiplication & Division Multiples of 2,5, and 10 to be included			Number: Fractions	Geometry: Position & Direction	Complete unit Assessments		
Summer II	Number: Place Value (within 100)	Measurement: Money		Measurement: Time	END OF YEAR ASSESSMENTS	Investigations		

The **ready-to-progress** criteria are **non-negotiable goals** for the end of the year. When used at the start of a year, you might want to use the materials and ideas from the previous year group. If you are teaching Year 4 for example, the Year 3 materials are used to review, practice and consolidate learning from the previous year.

## By the end of this unit: (Note: Ready to progress objectives are in purple)

Resources/links	Most children will be able to (Expected)	Some children will be able to (Greater Depth)
<b>Number: Place Value</b>		
<p>Remember to plan for the use of VARIATION, QUESTIONING and STEM SENTENCES. Rehearse, consolidate and reason ideas continuously.</p> <p><u><a href="#">NCETM: NUMBER ADDITION AND SUBTRACTION TEACHING GUIDES</a></u> to support the planning and teaching of key objectives: comparison of quantities and measures; whole, parts – part-part whole models; composition of numbers 0-5 and 6-10; additive structures (aggregation, partitioning, augmentation and reduction); +/- strategies within 10; composition of numbers 10-100, 20-100 and 11-19.</p> <p><u><a href="#">NCETM: EXEMPLIFICATION SLIDES - READY to PROGRESS OBJECTIVES GUIDANCE</a></u> to support achieving Ready to Progress criteria (objectives)</p>	<ul style="list-style-type: none"> <li>• count to and across 100 forwards and backwards, beginning with 0 or 1, or from any given number;</li> <li>• identify and represent two-digit numbers using objects and pictorial representations, including the number line;</li> <li>• <b>reason about the location of numbers to 20 within the linear system, including comparing using &lt;, &gt; and =;</b></li> <li>• count in multiples of twos, fives and tens up to 100;</li> <li>• count, read and write numbers to 100 in numerals;</li> <li>• find the least and the most when comparing numbers;</li> <li>• given a number, identify one more, less or equal to numbers up to 100;</li> <li>• use the language of: equal to, more than, less than, (fewer) most and least;</li> <li>• recognise the place value of each digit in a two-digit number</li> <li>• order numbers up to 100;</li> <li>• read and write numbers from one to twenty in numerals and words;</li> <li>• apply these skills in a range of contexts.</li> </ul>	<ul style="list-style-type: none"> <li>• count up to, back from and across 100s in ones;</li> <li>• identify, represent and estimate two-digit numbers using objects, pictorial representations and number lines;</li> <li>• count up and back in steps of twos, fives and tens from different starting points;</li> <li>• read and write numbers in numerals past 100;</li> <li>• confidently compare and order numbers to and beyond 100, using the language of 'less' and 'least', 'more' and 'most', and 'equal to';</li> <li>• understand what each digit represents in a two-digit number;</li> <li>• read and write numbers past twenty in numerals and words;</li> <li>• apply these skills in a wide range of contexts.</li> </ul>

<p><b>READY TO PROGRESS CRITERIA</b></p> <p><b>GUIDANCE</b></p> <p>to support knowledge and understanding of the Ready to Progress criteria (objectives)</p> <p>Y1 – Y6</p> <p><b>WHITE ROSE RESOURCES</b></p> <p>to additionally support planning and teaching of key objectives</p> <p>Teachers also have access to <a href="#">Twinkl</a> resources.</p>		
<b>Number: Addition &amp; Subtraction</b>		
	<ul style="list-style-type: none"> <li>• compose numbers to 10 from 2 parts, and partition numbers to 10 in parts including recognising odd and even numbers;</li> <li>• read and write and interpret mathematical statements (equations) involving the addition (+), subtraction (-) and equals (=) signs and relate additive expressions to equations to real life contexts;</li> <li>• reason with number bonds to 10 and 20 in different forms (eg <math>9 + 7 = 16</math>, <math>16 - 7 = 9</math>, <math>7 = 16 - 9</math>);</li> <li>• add and subtract one-digit and two-digit numbers to 20, including zero;</li> <li>• count on to add;</li> <li>• count back to subtract;</li> <li>• compare numbers by counting between them, using less than (&lt;), greater than (&gt;), equal too (=);</li> <li>• find gaps (missing numbers) in addition number sentences;</li> <li>• find gaps (missing numbers) in subtraction sentences where the first number is given;</li> <li>• solve one-step problems in practical contexts, which involve addition and subtraction, using concrete objects and pictorial representation, and missing number problems such as <math>7 = \underline{\hspace{1cm}} - 9</math>;</li> </ul>	<ul style="list-style-type: none"> <li>• derive all number bonds within 20;</li> <li>• recall all number bonds to 20;</li> <li>• solve problems using number bonds;</li> <li>• read and write more complex mathematical statements, such as <math>7 + 3 = 12 - 2</math>;</li> <li>• bridge 10 to add and subtract;</li> <li>• find the difference between two numbers;</li> <li>• find gaps in addition and subtraction number sentences;</li> <li>• reason about addition and subtraction, making rules or generalisations about what they notice;</li> <li>• solve addition and subtraction problems in different ways.</li> </ul>
<b>Geometry - Shape</b>		
	<ul style="list-style-type: none"> <li>• recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.</li> <li>• compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations;</li> </ul>	<ul style="list-style-type: none"> <li>• use shapes to solve different types of problems that involve reasoning and problem solving.</li> </ul>

	<ul style="list-style-type: none"> <li>make pictures and patterns with 2D shapes and make models with 3D shapes;</li> <li>recognise 2D and 3D shapes in real life.</li> </ul>	
<b>Number: Multiplication &amp; Division (Multiples Of 2,5,10)</b>		
<u>NCETM: MULTIPLICATION AND DIVISION TEACHING GUIDE Y1</u> to support counting in multiples of 2, 5 and 10 and understanding coin value (unitizing)	<ul style="list-style-type: none"> <li>group objects in 2,5,10;</li> <li>count the number of groups they have made;</li> <li>find how many groups make a given total;</li> <li>find the total number of objects by counting in groups;</li> <li>count in multiples of 2s, 5s and 10s</li> <li>identify number patterns and make connections between arrays, number patterns and counting in 2s, 5s and 10s;</li> <li>double a number using concrete objects;</li> <li>find half of a number using concrete objects and learn some doubles and halves;</li> <li>explain that a half is one of two same-sized (equal) groups;</li> <li>use doubling and halving to solve problems;</li> <li>make connections between arrays and make a context from an array.</li> <li>Solve one step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representations and arrays.</li> </ul>	<ul style="list-style-type: none"> <li>make an array from a context;</li> <li>remember doubles;</li> <li>remember halves;</li> <li>explain that doubling and halves are opposites.</li> </ul>
<b>Measurements: Length &amp; Height, Weight &amp; Volume</b>		
	<ul style="list-style-type: none"> <li>Compare, describe and solve practical problems for:</li> <li><b>Length and heights</b> (eg long/short, longer/shorter, tall/short, double/half)</li> <li><b>Mass/weight</b> (eg heavy/light, heavier than/lighter than)</li> <li><b>Capacity and volume</b> (eg full/empty, more than/less than, half/half full/quarter)</li> <li>estimate, compare, order lengths and heights, capacities and weights using appropriate vocabulary;</li> <li>measure and begin to record lengths and heights, mass/weight and capacity and volume using non standard units and appropriate standard units.</li> </ul>	<ul style="list-style-type: none"> <li>reason about lengths and heights, capacities and weights to solve more complex problems;</li> <li>measure and record lengths and heights, capacities and weights using standard units.</li> </ul>
<b>Number: Fractions</b>		
<u>NCETM: FRACTIONS TEACHING POINTS Y1</u> to support the teaching of fractions in Key Stage 1: recognise, find and name halves and quarters.	<ul style="list-style-type: none"> <li>share into two equal groups to find half of a quantity;</li> <li>share into four equal groups to find a quarter of a quantity;</li> <li>recognise, find and name half as one of two equal parts of an object, shape or quantity;</li> <li>recognise, find and name a quarter as one of four equal parts of an object shape or quantity.</li> <li>find half of measures of length, weight or capacity.</li> </ul>	<ul style="list-style-type: none"> <li>put two halves together to make one whole;</li> <li>put four quarters together to make one whole;</li> <li>explain why two halves and four quarters make the whole shape.</li> </ul>

### Geometry: Position & Direction

- describe where things are using the language of position, direction and motion including left, right, top, middle, bottom, on top of, in front of above, between, around, near, close, far, up and down, forwards and backwards and inside and outside;
- describe position, direction and movement, including half, quarter, three quarter and whole turns;
- follow instructions to move, change direction and turn;
- begin to recognise and use the clockwise direction and connect turning clockwise with movement on a clock face to and understand anticlockwise as a direction to turn.

- recognise and use the clockwise and anticlockwise directions to turn
- identify and work with patterns and shapes to show position, direction and movement.

### Measurement: Money

- Recognise and know the value of different denominations of **coins and notes**;
- sort and order coins (1p, 2p, 5p, 10p; 20p, 50p, £1, £2) and notes (£5, £10, £20, £50) according to their value;
- combine coins to give the same value eg 10p, 20p;
- combine coins to give different values to pay for items up to 10p and 20p;
- pay for items using the same coins or notes eg five 2p coins, two 5p coins;
- find change from 10p using part, whole models;
- Solve word problems using addition and subtraction, that involve one step or more than one step.

- combine coins and notes to give different values to pay for items beyond 20p;
- combine coins and notes to make a given value;
- find change from 20p using subtraction and counting on (find the gap/difference);
- Use reasoning about numbers and relationships to solve more complex problems and explain their thinking.

### Measurement: Time

- Compare, describe and solve practical problems for time (eg quicker, slower, earlier, later);
- use a sand timer to measure one minute;
- use a stopwatch to measure a time in seconds;
- order the days of the week and months of the year;
- recognise and use language relating to dates, including days of the week, weeks, months and years;
- sequence and talk about familiar events in chronological order using language such as: before after, next, first, today, yesterday, tomorrow, morning, afternoon and evening;
- tell the time to the hour and half past the hour and draw hands on a clock face to show these times.
- Measure and begin to record time (hours, minutes, seconds)

- use an analogue clock to calculate a duration in hours;
- interpret calendars and dates;
- use appropriate vocabulary to sequence more complex events in chronological order;
- calculate the difference between two times shown on analogue clock faces.

**Number and Place Value/CLIC** \*Maths on target = MT

<b>Y1</b>	<b>Progress Drive</b>	<b>Autumn Term BMBT &amp; SAFE 4</b>	<b>Spring Term BMBT &amp; SAFE 5</b>	<b>Summer Term BMBT &amp; SAFE 6</b>	<b>Cross-referenced to the National Curriculum</b>
<b>C O U N T I N G</b>	Saying Numbers	<b>Steps 3, 4</b> <b>I can count from 60-69</b> <b>I can count to 100</b>	Step 4 I can count to 100	Step 5 I can count past 100	<ul style="list-style-type: none"> <li>Count to and across 100, forward and backwards, beginning with 0 or 1, or from any given number</li> </ul>
	Reading Numbers	<b>Steps 3, 4</b> <b>I can read 2d multiples of 10,</b> <b>I can read 2d numbers</b>	<b>Step 5</b> <b>I can read 3d multiples of 100</b>	Step 5 I can read 3d multiples of 100	<ul style="list-style-type: none"> <li>Count, read and write numbers to 100 in numerals <b>MT pg 3,68</b></li> <li>Read and write numbers from 1 to 20 in numerals and words</li> </ul>
	Squiggleworth			Step 1 I can partition a 2d number	<b>MT pg 31</b>
	CORE Numbers (compare, order, round, estimate)	Step 1 I can understand numbers to 10	Step 1 I can understand numbers to 10	Step 2 I can understand numbers to 20	<ul style="list-style-type: none"> <li>Given a number, identify one more and one less <b>MT pg 5,32, 43, 57, 65,72</b></li> <li>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least <b>MT pg 1, 2</b></li> </ul>
	Counting Skills	✓	✓	✓	
	Actual Counting	✓	✓	✓	
	Counting on	✓	✓	✓	
	Counting Multiples	<b>Step 2</b> <b>I can count in 5s</b>	<b>Step 2</b> <b>I can count in 5s</b>	<b>Step 3</b> <b>I can count in 2s</b>	<ul style="list-style-type: none"> <li>Count in multiples of twos, fives and tens <b>MT: pg 12, 25-27, 58,66,95</b></li> </ul>
	Counting Fourways			<b>Steps 1, 2</b> 1s, 10s, <b>Step 2</b> 2s <b>Step 1</b> 25s	<ul style="list-style-type: none"> <li>Count, read and write numbers to 100 in numerals and words <b>MT pg 3,68</b></li> <li><b>MT: pg 4,8, 39, 74</b></li> </ul>
	Counting Along				

<b>LEARN Its</b> <b>Y1</b> <b>Ready to progress objectives:</b> Develop fluency in addition and subtraction facts within 10.  Count forwards and backwards in multiples of 2, 5 and 10 up to 10 multiples beginning with	<b>Autumn Term</b> <b>Challenge 4</b> <b>LEARN ITS Steps 2,3, 4 (20 secs)</b>	<b>Spring Term</b> <b>Challenge 5</b> <b>LEARN ITS Steps 3,4, 5 (30 secs)</b>	<b>Summer Term</b> <b>Challenge 6</b> <b>LEARN ITS Steps 4,5, 6 (60 secs)</b>
	<b>Step 4</b> <b>Addition:</b> Pairs of numbers which total 10 2+8, 3+7,4+6 <b>Multiplication:</b> x5 multiples Say multiples 1-5 Say multiples 1-10	<b>Step 5</b> <b>Addition:</b> Add on 2; Add on 3 4+2,5+2,6+2,7+2,9+2,4+3,5+3,6+3	<b>Step 6</b> <b>Doubling 6 - 9</b> 6+6,7+7,8+8,9+9 <b>Multiplication: x2 multiples</b> Say multiples 1-5 Say multiples 1-10 Say multiples 1-12

<p><b>any multiple and count forwards and backwards through the odd numbers.</b></p> <p><a href="#"><u>NCETM: EXEMPLIFICATION SLIDES - READY to PROGRESS OBJECTIVES GUIDANCE</u></a></p> <p>to support achieving Ready to Progress criteria (objectives)</p>	<p>Say multiples 1-12 Find and use real life representations for multiples of 5.</p>		<p>Find and use real life representations for multiples of 10.</p>
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Y1 IN N	Progress Drive	Autumn Term	Spring Term	Summer Term	Cross referenced to NC
I T S  N O T H I N G  N E W	Pim the Alien	Step 1 I can swap objects	Step 1 I can swap objects	Step 1 I can swap objects	<a href="#">MT pg 44</a>
	Adding with Pim				
	Doubling without crossing 10	Step 1 I can double 1 digit numbers	Step 2 I can double 2 digit multiples of 10	Step 2 I can double 2 digit multiples of 10	<a href="#">MT pg 28,29,59, 63,97</a>
			Step 1 I can double 1d number	Step 1 I can double 1d number	
	Doubling with crossing 10 & Halving			Step 1 I can find half of 3, 5, 7, 9	
	Jigsaw Numbers	Step 1 I can find the missing piece to 10	Step 1 I can find the missing piece to 10	Step 1 I can find the missing piece to 10	
	X10 / - 10				
	Smile multiplication				
	Coin multiplication				
	Where's Mully?				
	Pom's Words				
	Fact Families			Step 1 I know the Fact Families for 1d + 1d facts	

# A -CLIC Year 1 Terms 1 – 3 Link with BM CLIC steps for secure progression.

Amounts		C	L	I	C
Amounts	Steps	Counting	Learn Its	INN	Calculation
1 Amounts Exist	✓	1 Saying Numbers	1 My First Flashcards	1 Pim is Counting	Addition 16 - 20
2 Amounts Compared - 1	✓	2 Reading Numbers	2 My Body Learn Its	2 Pim Knows His	Subtraction 14 - 17
3 Amounts Are Needed	✓	3 Counting Skills	3 My 'Finger Double' Learn Its	3 Pim Swaps	Multiplication 5 - 6
4 Amounts Change	✓	4 Actual Counting	4 My Halving Learn Its	4 Doubling	Division 7 - 8
5 Amounts Compared - 2	✓	5 Ordering Numbers	5 Double Facts	5 Amounts	
6 Amounts Compared - 3	✓	6 Counting Multiples	6 My First Number Sentences	6 Halving	
7 Amounts Compared by Counting	✓	7 Squiggleworth	7 Number Buddy (Bonds to 10)	7 Who Won?	
8 No Amount	✓		8 'Add on 2' Learn Its	8 Little Jigsaws	
			9 'Add on 3' Learn Its	9 Fact Families	
			10 Single Digit Doubles	1 - 4	

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**Counting (in detail)**

1. Saying Numbers	Steps	2. Reading Numbers	Steps	3. Counting Skills	Steps	4. Actual Counting	Steps	5. Ordering Numbers	Steps	6. Counting Multiples	Steps	7. Squiggleworth	Steps
1 1 to 10	✓	1 1 to 10	✓	1 When to Count	✓	1 1 to 10	✓	1 1 to 10	✓	1 Multiples of 10	✓	1 2 Digit Numbers	1 - 5
2 11 to 20	✓	2 11 to 20	✓	2 Last Number is the Total	✓	2 1 to 20 & From a Pile	✓	2 Different Amounts & 1 to 20	✓	2 Multiples of 5	✓		
3 1 to 100 Skills	✓	3 1 to 100 Skills	✓	3 1 to 1 Correspondence	✓			3 2 Digit Numbers 2 Options	✓	3 Multiples of 2	4 - 5		
4 1 to 100 I'm Ready	✓	4 1 to 100 I'm Ready	✓					4 2 Digit Numbers 3 Options	✓				
5 Counting Past 100 Skills	✓	5 Counting past 100 Skills	✓										
6 Counting Past 100 I'm Ready	1 - 5												
7 Counting Backwards	5												

## CALCULATION

Y1 C A L C U L A T I O N	Progress Drives	Autumn Term <b>BMBT &amp; SAFE 4</b>	Spring Term <b>BMBT &amp; SAFE 5</b>		Summer Term <b>BMBT &amp;SAFE 6</b>	National Curriculum
	Addition	Step 5 I can add numbers of objects to 10	Step 6, 7, 8, 9 I can read a number sentence I can arrange a number I can solve a number sentence I can solve addition on a number line	Step 10, 11, 12 I can add 1 to a number up to 20 I can add 2 or 3 to a number up to 20 I can add a 1d number to a number to 20		<u>Addition and Subtraction</u> • Represent and use number bonds and related subtraction facts within 20 <b>MT pg 6,7,9,10,11,24,41,42,69-70,75-76</b>
	Subtraction	Step 5 I can take away numbers of objects to 10	Step 6, 7, 8, 9 I can read a subtraction number sentence I can arrange a subtraction number sentence I can solve a number subtraction sentence I can solve subtraction on a number line	Step 10, 11, 12 I can take 1 from a number to 20 I can take 2 or 3 from a number to 20 I can take a 1d number from a number 20		• Add and subtract one-digit and two-digit numbers to 20, including zero <b>MT pg 33</b> • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) <b>MT pg 67</b> • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ <b>MT pg 34-38,71,73 , 94</b>
	Multiplication	Step 3, 4 I can set out groups of blocks when 1 play	Step 4 I can find the total amount of blocks	Step 5, 6 I can draw out groups of dots I can find the total amount of dots		<u>Multiplication and division</u> • Solve one-step problems involving multiplication and division, by calculating the answer using

		<b>I can find the total amount of blocks</b>			concrete objects, pictorial representations and arrays with the support of the teacher <a href="#">MT pg 60-63, 96, 100-101</a>
Division	Step 5 I can share 6,9,12 or 15 objects between 3 people	<b>Step 6</b> <b>I can share 6, 9, 12 or 15 objects into 3</b>	<b>Step 7, 8, 9, 10, 11</b> <b>I can share 8, 12, 16 or 20 objects between 4 people</b> <b>I can share 8, 12, 16 or 20 objects into 4</b> <b>I can share equally to solve division problems</b> <b>I can make groups of 2, 5 or 10</b> <b>I can find how many altogether by counting through each group</b>		

## Y2 MATHS OVERVIEW

	Wk 1 (half week)	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8
Autumn I	Number: Place Value				Number: Addition & Subtraction			
Autumn II	Number: Addition & Subtraction		Measurement: Money		Number: Multiplication & Division		Complete unit Assessments	
Spring I	Number: Multiplication & Division		Statistics		Geometry: Properties of Shape			
Spring II	Geometry: Properties of Shape		Number: Fractions		MID YEAR ASSESSMENT			
Summer I	Measurement: Length and Height		Geometry: Position & Direction		Consolidation and Problem Solving (& Efficient Methods)		Complete SAT'S	
Summer II	Measurement: Time		Measurement: Mass, Capacity and Temperature		END OF YEAR ASSESSMENTS		Investigations	

The **ready-to-progress** criteria are **non-negotiable goals** for the end of the year. When used at the start of a year, you might want to use the materials and ideas from the previous year group. If you are teaching Year 4 for example, the Year 3 materials are used to review, practice and consolidate learning from the previous year.

### By the end of this unit: (Note: Ready to progress objectives are in purple)

Resources/links	Most children will be able to (Expected)	Some children will be able to (Greater Depth)
<b>Number: Place Value</b>		
<p><b>Remember to plan for the use of VARIATION, QUESTIONING and STEM SENTENCES. Rehearse, consolidate and reason ideas continuously.</b></p> <p><b><u>NCETM: NUMBER ADDITION AND SUBTRACTION TEACHING SLIDES Y2</u></b> to support the planning and teaching of key objectives: addition and subtraction – bridging 10; subtraction as difference; +/- 2 digit and 1 digit numbers; +/- 2 digit numbers and multiples of 10; +/- 2 digit and 2 digit numbers.</p> <p><b><u>NCETM: EXEMPLIFICATION SLIDES - READY to PROGRESS OBJECTIVES GUIDANCE</u></b> to support achieving Ready to Progress criteria (objectives)</p> <p><b><u>READY TO PROGRESS CRITERIA GUIDANCE</u></b></p>	<ul style="list-style-type: none"> <li>• count in steps of 2, 3, 5 from 0 and in tens from any number, forward or backwards;</li> <li>• read and write numbers to at least 100 in numerals and words;</li> <li>• compare and order numbers from 0 up to 100; use <math>&lt;</math>, <math>&gt;</math> and <math>=</math> signs</li> <li>• Identify, represent and estimate numbers using different representations including the number line;</li> <li>• partition 2 digit numbers into 10s and ones;</li> <li>• begin to partition 2 digit numbers in more complex ways;</li> <li>• recognise the place value of each digit in two-digit numbers (tens and ones), and compose and decompose two-digit numbers using standard and nonstandard partitioning;</li> <li>• reason about the location of any two digit number in the linear number system, including identifying the previous and next multiple of 10;</li> <li>• use place value and number facts to solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>• identify, represent and estimate two-digit numbers using a wide range of representations;</li> <li>• count in steps of 2, 3, 5 from zero and 10 from any number, identifying and continuing patterns;</li> <li>• compare and order numbers when represented in lots of different ways</li> <li>• confidently partition 2 digit numbers in more complex ways;</li> <li>• identify and use patterns to help them solve place value problems;</li> <li>• start to apply their knowledge of place value and number facts to 3digit numbers.</li> </ul>

<p>to support knowledge and understanding of the Ready to Progress criteria (objectives) Y1 – Y6</p> <p><b><u>WHITE ROSE RESOURCES</u></b></p> <p>to additionally support planning and teaching of key objectives</p> <p>Teachers also have access to <b>Twinkl</b> resources.</p>		
<b>Number: Addition &amp; Subtraction</b>		
	<ul style="list-style-type: none"> <li>•add and subtract across 10 (bridging 10);</li> <li>•recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100;</li> <li>•add and subtract numbers using concrete objects, pictorial representations,</li> <li>•add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two digit number;</li> <li>•Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two digit numbers;</li> <li>•subtract pairs of 2 digit numbers where no regrouping is required;</li> <li>•add three 1d numbers;</li> <li>•show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot;</li> <li>•demonstrate their thinking with equipment and explain their method;</li> <li>•recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems;</li> <li>•recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?";</li> <li>•interpret a range of vocabulary to solve problems with addition and subtraction: using concrete objects and pictorial representations including those involving numbers, quantities and measures.</li> <li>•use mental and written methods</li> </ul>	<ul style="list-style-type: none"> <li>•apply known facts to new facts;</li> <li>•partition numbers to bridge a ten;</li> <li>•add and subtract all 2 digit numbers mentally;</li> <li>•find the most efficient method and explain their reasoning;</li> <li>•reason about addition and subtraction, making predictions and estimating;</li> <li>•use the inverse relationship to check calculations and solve more complex missing number problems;</li> <li>•solve 2 step problems.</li> </ul>

<b>Measurement: Money</b>		
	<ul style="list-style-type: none"> <li>• know the value of different coins;</li> <li>• compare and order coins and notes and find totals;</li> <li>• recognise and use symbols for pounds (£s) and pence (p);</li> <li>• combine coins and notes to make a given total;</li> <li>• find different combinations of coins which equal the same value (amounts of money).</li> <li>• find change from amounts up to 50p by subtraction and counting on (find the gap/difference);</li> <li>• Use reasoning about numbers and relationships to solve problems and explain their thinking; <ul style="list-style-type: none"> <li>• Solve money word problems, using the four operations, that involve one step;</li> <li>• Use coins to count in multiples of 2, 5 and 10.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Use reasoning about money to solve more complex problems and explain their thinking. <ul style="list-style-type: none"> <li>• Solve money word problems, using the four operations, that involve more than one step;</li> <li>• find change from amounts up to £1.00 by subtraction and counting on (find the gap/difference);</li> <li>• Use coins and notes to count in multiples.</li> </ul> </li> </ul>
<b>Number: Multiplication &amp; Division</b>		
<p><b>NCETM: MULTIPLICATION AND DIVISION TEACHING GUIDE Y2</b></p> <p>to support counting in multiples of 2, 5 and 10, multiplication representing equal groups; times tables commutativity including doubling/halving and factors of 0 and 1; division – grouping and sharing with remainders.</p>	<ul style="list-style-type: none"> <li>• count in steps of 2, 3, and 5 from 0, and in tens from any number, forwards and backwards;</li> <li>• <b>recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables;</b></li> <li>• recall and use multiplication and division facts for 2, 5 and 10 times tables including recognising odd and even numbers and write the number sentences involved using <math>\times</math>, <math>\div</math> and <math>=</math> signs;</li> <li>• use equipment and different models and images to demonstrate multiplication and division;</li> <li>• write a multiplication or division sentence from a context or array;</li> <li>• write a repeated addition sentence and interpret a multiplication or division sentence.</li> <li>• <b>relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotative division);</b></li> <li>• show that multiplication of 2 numbers can be done in any order (commutative) and division of one number by another cannot;</li> <li>• make a context for a multiplication or division sentence;</li> <li>• demonstrate that multiplication and division are inverses;</li> </ul>	<ul style="list-style-type: none"> <li>• make generalisations about multiplication facts and reason outside these facts, including reasoning about odd and even facts;</li> <li>• determine remainders using known facts and know what to do with this remainder in a context;</li> <li>• solve problems that involve one more step;</li> <li>• link doubling and halving to multiplying and dividing by 2 and use this to solve problems.</li> </ul>

	<ul style="list-style-type: none"> <li>solve problems involving multiplication and division, using materials arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context.</li> </ul>	
<b>Statistics</b>		
	<ul style="list-style-type: none"> <li>make and interpret a tally chart;</li> <li>construct and interpret pictograms and block diagrams;</li> <li>complete and interpret a simple table;</li> <li>ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.</li> <li>ask and answer questions about totalling and comparing categorical data.</li> </ul>	<ul style="list-style-type: none"> <li>generate, present and compare data in different ways;</li> <li>move beyond answering simple retrieval questions and extend to finding the total number and finding a difference.</li> </ul>
<b>Geometry: Shape</b>		
	<ul style="list-style-type: none"> <li>sort common 2D and 3D shapes according to their properties;</li> <li><b>Use precise language to describe the properties of 2D and 3D shapes (number of edges, faces and vertices), and compare shapes by reasoning about similarities and differences in properties;</b></li> <li>recognise vertical line symmetry in 2D shapes;</li> <li>identify the number of sides and line symmetry in a 2D shape;</li> <li>identify 2D shapes on the surface of 3D shapes (eg a circle on a cylinder and a triangle on a pyramid);</li> <li>read and write names for common 2D and 3D shapes;</li> <li>compare and sort 2D and 3D shapes and everyday objects;</li> <li>identify regular and irregular shapes;</li> <li>order and arrange combinations of mathematical objects in patterns and sequences.</li> </ul>	<ul style="list-style-type: none"> <li>use precise vocabulary to describe 3D shapes according to sides, edges, vertices and faces;</li> <li>identify polygons and quadrilaterals</li> <li>explain the difference between regular and irregular shapes.</li> </ul>
<b>Number: Fractions</b>		
<b>NCETM: FRACTIONS TEACHING POINTS</b> <u><b>Y2</b></u> <b>to support the teaching of fractions in Key Stage 1: recognise, find and name halves and quarters; recognise find name and write fractions of length, shape and a set of objects and quantities; recognise simple equivalences <math>\frac{1}{2} = \frac{2}{4}</math>.</b>	<ul style="list-style-type: none"> <li>recognise, find, name and write half (<math>1/2</math>), quarter (<math>1/4</math>), two quarters (<math>2/4</math>), three quarters (<math>3/4</math>) and one third (<math>1/3</math>) of a length, shape, set of objects or quantity;</li> <li>find half and then half again, to find one quarter of numbers and shapes;</li> <li>recognise the equivalence of half (<math>1/2</math>) and two quarters (<math>2/4</math>);</li> <li>write a simple fraction sentence for half and one quarter (eg <math>1/2</math> of <math>6 = 3</math>);</li> <li>explain that a fraction has been divided into equal groups.</li> <li>share objects into 3 groups to find one third.</li> <li>count in halves.</li> </ul>	<ul style="list-style-type: none"> <li>find a whole amount from knowing a fraction;</li> <li>explain how they can find the full amount from a fraction;</li> <li>write fraction sentences for one third and three quarters;</li> <li>count in quarters;</li> <li>count in thirds.</li> <li>place halves and quarters on a number line.</li> </ul>

Geometry: Position and Direction		
	<ul style="list-style-type: none"> <li>order and arrange combinations of mathematical objects in patterns and sequences.</li> <li>use mathematical vocabulary to describe position, direction and movement, including movement in a straight line;</li> <li>distinguish between rotation as a turn and in terms of right angles for quarter, half and <math>\frac{3}{4}</math> turns in clockwise and anti-clockwise directions.</li> </ul>	<ul style="list-style-type: none"> <li>Work with patterns of shapes, including those in different orientations;</li> <li>Use the concept of language of angles to describe 'turn' by applying rotations in practical contexts.</li> </ul>
Measurement: Length and Height		
	<ul style="list-style-type: none"> <li>choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm);</li> <li>measure m to the nearest appropriate unit, using rulers,</li> <li>compare and order lengths, heights and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math>.</li> </ul>	<ul style="list-style-type: none"> <li>use reasoning about numbers and relationships to solve more complex problems and explain their thinking.</li> <li>solve word problems using the four operations, that involves more than one step.</li> </ul>
Measurement: Time		
	<ul style="list-style-type: none"> <li>tell and write the time to quarter past/to the hour and draw the hands on a clock face to show these times;</li> <li>tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times;</li> <li>know the number of minutes in an hour and the number of hours in a day;</li> <li>compare and sequence durations of time using different measurements;</li> <li>know the months of the year and know that they have different days.</li> </ul>	<ul style="list-style-type: none"> <li>compare and sequence intervals of time;</li> <li>read the time on a clock to the nearest 5 minutes. Count in multiples of 5.</li> <li>finding the difference between times.</li> </ul>
Measurement: Mass, Capacity and Temperature		
	<ul style="list-style-type: none"> <li>Estimate, compare and order mass, capacity and temperature;</li> <li>use appropriate language such as more, less, heavier, lighter, longer, shorter.</li> <li>Choose appropriate standard units to estimate and measure <b>mass</b> (kg/g) <b>temperature</b> (degrees C) <b>capacity</b> (litres/ml) to the nearest appropriate unit, using rulers, scales to measure mass in g and kg capacity (l, ml) using various vessels, and temperature (degrees Celsius - thermometer);</li> <li>use the <math>&lt;</math>, <math>&gt;</math> and <math>=</math> signs to compare mass, capacity and temperature.</li> </ul>	<ul style="list-style-type: none"> <li>use scales to measure mass to the nearest g and kg, and capacity to the nearest l, ml;</li> <li>solve word problems using the four operations, that involves more than one step.</li> </ul>
Measurement: Money		
	<ul style="list-style-type: none"> <li>recognise and use symbols for pounds (£) and pence (p);</li> <li>combine amounts to make a particular value;</li> <li>find different combinations of coins that equal the same amount of money;</li> </ul>	<ul style="list-style-type: none"> <li>add and subtract amounts crossing £1;</li> <li>solve word problems using money that involve more than one step.</li> </ul>

	<ul style="list-style-type: none"> <li>• solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.</li> </ul>	
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## Number and Place Value/CLIC

Y2 C O U N T I N G	Progress Drive	Autumn Term <b>BMBT &amp; SAFE 7</b>	Spring Term <b>BMBT &amp; SAFE 8</b>	Summer Term <b>BMBT &amp;SAFE 9</b>	Cross-referenced to the National Curriculum
Saying Numbers	✓	✓			
Reading Numbers	Step 5 I can read 3d multiples of 100	<b>Step 6 I can read 3d numbers</b>	Step 6 I can read 3d numbers		<ul style="list-style-type: none"> <li>• recognise the place value of each digit in a two-digit number (tens, ones)</li> <li>• read and write numbers to at least 100 in numerals and in words</li> </ul>
Squiggleworth	Step 1 I can partition a 2d number	Step 1 I can partition a 2d number	Step 1 I can partition a 2d number		MT p8
CORE Numbers (compare, order, round, estimate)	Step 2 I can understand numbers to 20	Step 2 I can understand numbers to 20	<b>Step 3 I can understand 2d numbers</b>		<ul style="list-style-type: none"> <li>• compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs</li> <li>• identify, represent and estimate numbers using different representations, including the number line</li> </ul>
Counting Skills	✓	✓	✓		
Actual Counting	✓	✓	✓		
Counting on	✓	✓	✓		
Counting Multiples	Step 3 I can count in 2s	Step 3 I can count in 2s	<b>Step 4 I can count in 3s</b>		count in steps of 2, 3, and 5 from 0, and in tens from any number, forwards and backwards
Counting Fourways	<b>Step 3 100s</b>	<b>Steps 2, 3, 4 50s, 500s, 5000s</b> <b>Steps 5 1/2s</b>	<b>Steps 2, 3, 4 20s, 200s, 2000s,</b> <b>Steps 5 1/4s</b>		
Counting Along			<b>Step 1 I can count along when numbers are written</b>		
					use place value and number facts to solve problems

<b>Y2</b> <b>LEARN Its</b>	<b>Autumn Term</b> <b>Challenge 7</b> <b>LEARN ITS Steps 5,6, 7 (60 secs)</b>	<b>Spring Term</b> <b>Challenge 8</b> <b>LEARN ITS Steps 6,7, 8 (60 secs)</b>	<b>Summer Term</b> <b>Challenge 9</b> <b>LEARN ITS Steps 7,8, 9 (60 secs)</b>
<b>Ready to progress objectives:</b> Secure fluency in addition and subtraction facts within 10.  <u>NCETM: EXEMPLIFICATION SLIDES - READY to PROGRESS OBJECTIVES GUIDANCE</u> to support achieving Ready to Progress criteria (objectives)	<b>Step 7</b> <b>Addition:</b> Add on 4; Add on 3 $7+4, 8+4, 9+4, 8+3, 9+3$ <b>Multiplication: x10 table</b> Say multiples 1–12 Say x10 table Jumbled x10 table facts <b>Fact families x10\div10</b>	<b>Step 8</b> <b>Addition:</b> ‘near doubles’ linked to doubles already learnt $5+4, 5+6, 6+7, 8+7, 8+9$ <b>Multiplication: x5 table</b> Say multiples 1–12 Say x10 table Jumbled x5 table facts <b>Fact families x5\div5</b>	<b>Step 9</b> <b>Addition:</b> Link to other number bonds and adding 9 by ‘adding 10-1’ $6+8, 5+7, 5+8, 5+9, 6+9, 7+9$ <b>Multiplication: x2 tables</b> Say multiples 1–12 Say x2 table Jumbled x10 table fact <b>Fact families x2\div2</b>

<b>Y2</b>  <b>IN</b>  <b>IT</b>  <b>NOTH</b>  <b>ING</b>  <b>NEW</b>	<b>Progress Drive</b>	<b>Autumn Term</b>	<b>Spring Term</b>	<b>Summer Term</b>
Pim the Alien	Step 1 I can swap objects	Step 1 I can swap objects	Step 1 I can swap objects	Step 1 I can swap objects
Adding with Pim	<b>Step 1</b> I can add tens	<b>Step 2</b> I can add hundreds	<b>Step 3</b> I can add thousands	
Doubling without crossing 10	<b>Step 3</b> I can double 2 digit numbers (double 44 is 88)	Step 3 I can double 2 digit numbers (double 44 is 88)	Step 3 I can double 2 digit numbers (double 44 is 88)	
Doubling with crossing 10 & Halving	<b>Step 2</b> I can double 2d multiples of 10 (double 60 is 120)	Step 2 I can double 2d multiples of 10 (double 60 is 120)	<b>Step 3</b> I can double 2d numbers (double 26 is 52)	
Jigsaw Numbers	<b>Step 2</b> I know half of 30, 50, 70, 90	Step 2 I know half of 30, 50, 70, 90	<b>Step 3</b> I know half of 300, 500, 700, 900	
X 10 ÷ 10			<b>Step 1</b> I can multiply whole numbers by 10 ( $13 \times 10 = 130$ )	<b>Step 1</b> I can divide multiples of 10 by 10 ( $130 \div 10 = 13$ )
Smile multiplication				
Coin multiplication			<b>Steps 1, 2</b> I can complete a 1, 10 card	

			I can complete a 1, 2, 5, 10 card
Where's Mully?		Step 1 I can find Mully using my tables	Step 1 I can find Mully using my tables
Pom's Words			
Fact Families	Step 2 I can turn 1d + 1d facts into multiples of 10 ( $30 + 40 = 70$ , $40 + 30 = 70$ )	Step 2 I can turn 1d + 1d facts into multiples of 10 ( $30 + 40 = 70$ , $40 + 30 = 70$ )	Step 3, 4 I know the Fact Family when given a simple addition fact I know the Fact Families for 1d x 1d facts

## Y2 CALCULATION

Progress Drives	Autumn Term CLIC	Spring Term CLIC	Summer Term CLIC	National Curriculum
Y2 Addition	Steps 13, 14, 15 I can add 1 to a 2d number I can add 10 to a 2d number I can add 10 to any 2d number	Steps 16, 17, 18, 19 I can add a 1d number to a 2d tens number I can solve 2d + 1d I can add a 2d tens number to another one I can solve any 1d + 1d in my head	Steps 20, 21, 22, 23, 24 I can solve any 2d + 1d I can add any 2d tens number to another one I can add a 2d tens number to a 2d number I can add any 2d tens number to a 2d number I can add a 2d number to a 2d number	<ul style="list-style-type: none"> <li>solve problems with addition and subtraction:</li> <li>using concrete objects and pictorial representations, including those involving numbers, quantities and measures</li> <li>applying their increasing knowledge of mental and written methods</li> <li>recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.</li> <li>add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> <li>a two-digit number and ones</li> <li>a two-digit number and tens</li> <li>two two-digit numbers</li> <li>adding three one-digit numbers</li> </ul> </li> <li>show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</li> <li>recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</li> </ul>
Column Method – Addition			Step 1 I can solve a 2d + 2d	
Subtraction	Steps 13, 14, 15 I can take 10 from a multiple of 10 I can take 10 from a 2d number I can take a multiple of 10 from a multiple of 10	Steps 16, 17, 18, 19 I can take a 1d number from a multiple of 10 I can solve 2d - 1d I can solve any 2d - 1d I can solve any 3d - 1d	Steps 20 – 27 I can spot the next multiple of 10 I can count to the next multiple of 10 I know the gap to the next multiple of 10 I know the 1d gap from a multiple of 10 I know the total gap across a multiple of 10 I can take a multiple of 10 from any 2d number I can find the 2 gaps in a 2d = 2d question I can solve any 2d - 2d	

Column Method - Subtraction			<b>Step 1</b> <b>I can solve a 2d – 2d</b>	
Multiplication	<b>Steps 7, 8</b> <b>I can write out repeated addition</b> <b>I can solve repeated addition</b>	Step 8 I can solve repeated addition	<b>Step 9</b> <b>I can solve 1d x 1d</b>	<ul style="list-style-type: none"> <li>recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.</li> <li>calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (<math>\times</math>), division (<math>\div</math>) and equals (=) signs.</li> <li>show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.</li> <li>solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</li> </ul>
Division	<b>Step 12</b> <b>I can find how many altogether by counting in 2s, 5s, or 10s</b>	<b>Steps 13, 14, 15</b> <b>I can arrange a division number sentence</b> <b>I can solve a division number sentence with objects</b> <b>I can solve division, using objects (with remainders)</b>	<b>Steps 16, 17</b> <b>I can use a times table fact to find a division fact</b> <b>I can use a times table fact to find a division fact (with remainders)</b>	

## Y3 MATHS OVERVIEW

	Wk 1 (half week)	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8
Autumn I	Number: Place Value			Number: Addition & Subtraction				
Autumn II	Number: Addition and Subtraction		Number: Multiplication & Division					Complete unit Assessments
Spring I	Number: Multiplication & Division		Number: Fractions & Decimals		Measurement: Money			
Spring II	Statistics		Measurement: Length & perimeter		MID YEAR ASSESSMENT			
Summer I	Number: Fractions		Measurement: Time			Complete unit Assessments		
Summer II	Geometry: Properties of Shapes		Measurement: Mass & Capacity		END OF YEAR ASSESSMENTS		Investigations	

The **ready-to-progress** criteria are **non-negotiable goals** for the end of the year. When used at the start of a year, you might want to use the materials and ideas from the previous year group. If you are teaching Year 4 for example, the Year 3 materials are used to review, practice and consolidate learning from the previous year.

### By the end of this unit: **(Note: Ready to progress objectives are in purple)**

Resources/links	Most children will be able to (Expected)	Some children will be able to (Greater Depth)
<b>Number: Place value</b>		
<p>Remember to plan for the use of VARIATION, QUESTIONING and STEM SENTENCES. Rehearse, consolidate and reason ideas continuously.</p> <p><a href="#">NCETM: NUMBER ADDITION AND SUBTRACTION TEACHING SLIDES Y3</a> to support the planning and teaching of key objectives: composition and calculating - 100 and bridging 100, and 3 digit numbers; mental strategies – calculations up to 999; column addition; column subtraction.</p> <p><a href="#">NCETM: EXEMPLIFICATION SLIDES - READY to PROGRESS OBJECTIVES GUIDANCE</a> to support achieving Ready to Progress criteria (objectives)</p> <p><a href="#">READY TO PROGRESS CRITERIA GUIDANCE</a> to support knowledge and understanding of the Ready to Progress criteria (objectives) Y1 – Y6</p> <p><a href="#">WHITE ROSE RESOURCES</a> to additionally support planning and teaching of key objectives</p>	<ul style="list-style-type: none"> <li>know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10;</li> <li>count in multiples of four from zero;</li> <li>count in multiples of eight from zero;</li> <li>count in multiples of 50 from zero;</li> <li>count in multiples of 100 from zero;</li> <li>recognise multiples of 4, 8, 50 and 100;</li> <li>continue number sequences;</li> <li>compare and order numbers up to 1000 using &lt;, &gt; and = signs;</li> <li>identify, represent and estimate numbers using different representations, including a number line;</li> <li>find 10 more or less than a given number up to 1000;</li> </ul> <p>Find 100 more or less than a given number up to 1000;</p> <ul style="list-style-type: none"> <li>recognise the place value of each digit in three-digit numbers (100s, 10s and 1s), and compose and decompose three-digit numbers using standard and non-standard partitioning;</li> <li>reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10, and rounding to the nearest of each.</li> <li>read and write numbers up to 1000 in numerals and words.</li> </ul>	<ul style="list-style-type: none"> <li>identify and sort numbers using set criteria;</li> <li>find 10 more or less than a given number up to 500;</li> <li>find 100 more or less than a given number up to 1100;</li> <li>partition numbers in a variety of ways;</li> <li>read numbers up to 1000 in numerals and words.</li> </ul>

<p>Teachers also have access to <b>Twinkl</b> resources.</p>	<ul style="list-style-type: none"> <li>• find missing numbers in a given sequence;</li> <li>• <b>Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts;</b></li> <li>• solve place value problems involving measures.</li> </ul>	
<b>Number: Addition &amp; Subtraction</b>		
	<ul style="list-style-type: none"> <li>• add and subtract three-digit numbers and ones mentally;</li> <li>• add and subtract three-digit numbers and tens mentally;</li> <li>• add and subtract three-digit numbers and hundreds mentally;</li> <li>• <b>add numbers up to three digits using a formal written method (columnar method);</b></li> <li>• <b>subtract numbers up to three digits using a formal written method (columnar method);</b></li> <li>• estimate the answer to a calculation and use inverse operations to check answers to a calculation;</li> <li>• <b>manipulate the additive relationship: understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure;</b></li> <li>• <b>understand and use the commutative property of addition, and understand the related property for subtraction;</b></li> <li>• find missing numbers using the inverse;</li> <li>• solve one-step problems involving three-digit numbers, using number facts, place value and more complex addition and subtraction.</li> </ul>	<ul style="list-style-type: none"> <li>• add and subtract a mixture of three-digit numbers and ones, tens and hundreds mentally;</li> <li>• add two- and three-digit numbers using a formal written method, crossing the thousand-boundary;</li> <li>• subtract numbers up to four digits using exchanging;</li> <li>• estimate the answer to a calculation and use inverse operations to check answers;</li> <li>• find multiple missing numbers using the inverse;</li> <li>• solve one- and two-step problems;</li> <li>• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</li> </ul>
<b>Number: Multiplication and Division</b>		
<p><b>NCETM: MULTIPLICATION AND DIVISION TEACHING GUIDE Y3</b></p> <p>to support the planning and teaching of key objectives: building times tables x2, x4, x8, x3, x6, x9 - counting in multiples of 2, 4 and 8 and doubling and halving and counting in multiples of 3, 6 and 9; understand and use the relationship between the above times tables; use known times tables to calculate 1d x 1d numbers, 2 digit x 1 digit numbers and 2 digit ÷ 1 digit numbers; build 7 times tables and patterns and relationships across the above times tables eg divisibility rules.</p>	<ul style="list-style-type: none"> <li>• recall multiplication and division facts for the 3x, 4x and 8x tables with increasing speed and accuracy;</li> <li>• know that factor x factor = product;</li> <li>• begin to identify patterns in the 3x, 4x and 8x tables when presented visually (e.g. coloured on a hundred square);</li> <li>• use multiplication and division facts from the 3x, 4x and 8x tables to solve word problems;</li> <li>• <b>apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division;</b></li> <li>• identify patterns in known multiplication tables.</li> <li>• multiply multiples of 10 (including three-digit numbers) mentally using known facts;</li> <li>• write and calculate mathematical statements for multiplication and division using known multiplication tables, including 2d x 1d, using mental strategies (eg smile multiplication) and</li> </ul>	<ul style="list-style-type: none"> <li>• quickly and accurately recall multiplication and division facts for the 3x, 4x and 8x tables;</li> <li>• solve mathematical problems and puzzles using known multiplication and division facts; identifying and explaining patterns and making predictions.</li> <li>• multiply multiples of 10 mentally;</li> <li>• use a range of written methods for multiplication and division with increasing confidence.</li> </ul>

	<p>formal written methods (short multiplication and short division)</p> <ul style="list-style-type: none"> <li>use the grid method to solve multiplication problems which go beyond known facts (multiplying two digit and three digit numbers);</li> <li>begin to use expanded multiplication when working with numbers beyond known facts;</li> <li>use number lines to solve division problems beyond known facts with increasing accuracy and speed;</li> <li>estimate the answer to a calculation and use inverse operations to check answers to a calculation;</li> <li>begin to use the bus stop method as a written method for division;</li> <li>solve missing number problems which go beyond known facts;</li> <li>solve simple scaling and correspondence problems using facts from the 3x, 4x and 8x tables and other solve simple scaling and correspondence problems using facts from the 3x, 4x and 8x tables and other known tables.</li> <li>beginning to work out the scale used from the measurements;</li> <li>spotting patterns when solving correspondence problems and beginning to predict the number of possibilities.</li> </ul>	
<b>Measurement: Length &amp; Perimeter</b>		
	<ul style="list-style-type: none"> <li>estimate and measure to the nearest centimetre;</li> <li>estimate and measure to the nearest metre;</li> <li>estimate and measure to the nearest mm</li> <li>measure and draw lines in centimetres and millimetres to the nearest 5mm;</li> <li>measure and draw lines in mixed units (centimetres and millimetres);</li> <li>measure, compare, add and subtract: length (m/cm/m); mass (kg/g); volume/capacity (l/ml);</li> <li>solve word problems by adding and subtracting three measurements in centimetres;</li> <li>solve addition problems involving metres by adding two three-digit numbers totaling up to 550m;</li> <li>solve subtraction problems involving metres by subtracting two three-digit numbers involving</li> <li>solve addition and subtraction problems involving millimetres by adding four amounts;</li> <li>use &lt;, &gt; and = to compare two mixed-unit length measurements;</li> <li>order mixed-unit length measurements; exchanging;</li> <li>measure the perimeter of rectangles and squares;</li> <li>draw two different rectangles with the same perimeter;</li> <li>calculate the perimeter of squares (all or some side measurements given);</li> <li>measure the perimeter of simple 2D shapes;</li> </ul>	<ul style="list-style-type: none"> <li>estimate and measure in whole and half centimetres;</li> <li>estimate and measure in whole and half metres;</li> <li>estimate and measure in multiples of one millimetre;</li> <li>order sets of mixed measurements;</li> <li>solve length problems involving calculating a missing number;</li> <li>solve addition and subtraction problems involving millimetres by adding four amounts;</li> <li>use &lt;, &gt; and = to compare two mixed-unit length measurements;</li> <li>order mixed-unit length measurements;</li> </ul>

## Statistics

- collect data in a tally chart;
- collate data into a frequency table;
- create simple bar charts and pictograms;
- create and interpret scaled bar charts and pictograms;
- create and interpret Venn and Carroll diagrams;
- create and interpret a table of information;
- ask and answer one step and two-step questions about charts, tables and diagrams (eg 'How many more?' and 'How many fewer) using information presented in scaled bar charts and pictograms and tables.

## Measurement: Money

- |  |   |  |
|--|---|--|
|  | <ul style="list-style-type: none"> <li>• compare money amounts up to £1;</li> <li>• make different money combinations using coins up to £1;</li> <li>• choose the correct symbol &lt;, &gt; or = to compare the money amounts;</li> <li>• add together up to three items in pence where the total equals up to £1;</li> <li>• add together up to three items in pounds where the total equals up to £100;</li> <li>• calculate the change required when paying for a single and several items, paying with £1 and p in practical contexts;</li> </ul> | <ul style="list-style-type: none"> <li>• compare money amounts up to £1.50;</li> <li>• make different money combinations using coins up to £1.50;</li> <li>• work out missing money amounts where the total and one amount is given;</li> <li>• add together up to three items in pounds where the total equals up to £250;</li> <li>• calculate the change required when paying for a single item and several items, paying with £2.</li> </ul> |
|--|---|--|

## Number: Fractions

**NCETM: FRACTIONS TEACHING GUIDE Y3**  
to support understanding of fractions: the part =whole relationship; unit and non unit fractions and adding and subtracting fractions within one whole.

- count up and down in tenths;
- share objects to find a fraction of a set of objects;
- recognise, find and write fractions of a discrete set of objects: unit fractions and non unit fractions with small denominators;
- add and subtract fractions with the same denominator within one whole (eg  $5/7 + 1/7 = 6/7$ );
- **Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts;**
- recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1 digit numbers or quantities by 10;
- recognise and use fractions as numbers: unit fractions and non unit fractions with small denominators;
- compare and order unit fractions and fractions with the same denominator;
- identify pairs of equivalent fractions on a fraction wall;
- use <, > and = to compare groups of fractions;
- place fractions appropriately on a blank number line;
- understand the link between tenths as fractions and as decimals;
- calculate unit and non-unit fractions of sets of objects or numbers;
- recall equivalents for unit and non-unit fractions;
- complete and create fraction number sequences.

	<ul style="list-style-type: none"> <li>• recognise and show, using diagrams, equivalent fractions with small denominators;</li> <li>• <b>find unit fractions of quantities using known division facts (multiplication tables fluency).</b></li> <li>• <b>reason about the location of any fraction within 1, in the linear number system;</b></li> <li>• complete fraction number lines and number sequences;</li> <li>• <b>add and subtract fractions with the same denominator, within 1 whole (eg <math>5/7 + 1/7 = 6/7</math>);</b></li> <li>• use resources to support finding a fraction of a set of objects or number.</li> </ul>	
<b>Measurement: Time</b>		
	<ul style="list-style-type: none"> <li>• read the time in five-minute intervals on an analogue clock;</li> <li>• tell, read and write the time in minute intervals on an analogue clock including Roman numerals from 1 to X11 and 12 hour and 24 hour clocks;</li> <li>• identify whether events could be a.m. or p.m. or both;</li> <li>• read digital clocks in five-minute intervals and state the time in analogue form;</li> <li>• read clocks with Roman numerals in five-minute intervals;</li> <li>• use vocabulary such as o'clock, a.m. and p.m., morning, afternoon, noon and midnight;</li> <li>• state how many days there are in each month and how many days in a year and a leap year;</li> <li>• order times that use a.m. and p.m. seconds, minutes, hours and o'clock;</li> <li>• calculate the number of days from one date to another (up to 50 days);</li> <li>• compare the duration of events in minutes and Seconds for example, to calculate the time taken by particular events or tasks;</li> <li>• know the number of seconds in a minute, minutes in an hour and hours in a day;</li> <li>• calculate and compare the length of events using digital times in fifteen-minute intervals;</li> </ul>	<ul style="list-style-type: none"> <li>• read clocks with Roman numerals – minute intervals;</li> <li>• write a definition for time vocabulary such as: o'clock, a.m. and p.m., morning, afternoon, noon and midnight;</li> <li>• calculate the number of days from one date to another (over 100 days);</li> <li>• calculate and compare the length of events using digital times in five-minute intervals.</li> </ul>
<b>Geometry: Properties of Shapes</b>		
	<ul style="list-style-type: none"> <li>• describe the properties of 3d shapes using the vocabulary faces, edges and vertices;</li> <li>• draw 2D shapes and make 3D shapes using modelling materials;</li> <li>• recognise 3d shapes in different orientations and describe them;</li> <li>• <b>recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations;</b></li> <li>• recognise angles as a property of shape or a description of a turn and identify right angles;</li> <li>• recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn;</li> </ul>	<ul style="list-style-type: none"> <li>• identify 3d shapes from their nets and be able to sort 2d and 3d shapes on Venn and Carroll diagrams;</li> <li>• identify acute and obtuse angles;</li> <li>• compare and classify geometric shapes, based on the property of lines.</li> </ul>

	<ul style="list-style-type: none"> <li>identify whether angles are greater than or less than a right angle;</li> <li>identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</li> <li><b>draw polygons by joining marked points, and identify parallel and perpendicular sides.</b></li> </ul>	
<b>Measurement: Mass &amp; Capacity</b>		
	<ul style="list-style-type: none"> <li>children read scales to measure mass in intervals of 10g, 20g, 25g, 100g and 200g;</li> <li>add and subtract in kilograms (addition up to 1000kg and subtraction not involving exchanging);</li> <li>read scales to measure capacity in intervals of 100ml, 200ml, 250ml;</li> </ul>	<ul style="list-style-type: none"> <li>children read scales to measure mass in intervals of 25g and 200g;</li> <li>draw their own scale to mark given masses;</li> <li>add in kilograms, adding totals over 1000kg;</li> <li>mark cylinders to given volume measures;</li> </ul>

### Number and Place Value/CLIC    \*Target your Maths = TYM

<b>Y3</b>	<b>Progress Drive</b>	<b>Autumn Term BMBT &amp; SAFE 10</b>	<b>Spring Term BMBT &amp; SAFE 11</b>	<b>Summer Term BMBT &amp; SAFE 12</b>	<b>Cross-referenced to the NC</b>
<b>C O U N T I N G</b>	Saying Numbers	✓	✓	✓	
	Reading Numbers	Step 6 I can read 3d numbers	Step 6 I can read 3d numbers	Step 6 I can read 3d numbers	read and write numbers up to 1000 in numerals and in words. <b>TYM: p2-3</b> identify, represent and estimate numbers using different representations. <b>TYM: p 2-3</b>
	Squiggleworth	Step 2 (i) I can partition a 3d then a 4d number	<b>Step 2 (i) I can partition a 3d then a 4d number</b>	Steps 2 (ii), 3 I can partition a 1dp number	recognise the place value of each digit in a three-digit number (hundreds, tens, ones). <b>TYM: p4-6, 9, 84</b>
	CORE Numbers (compare, order, round, estimate)	Step 3 I can understand 2d numbers	Step 3 I can understand 2d numbers	<b>Step 4 I can understand 3d numbers</b>	compare and order numbers up to 1000 <b>TYM: p7</b>
	Counting Skills	✓	✓	✓	
	Actual Counting	✓	✓	✓	
	Counting on	✓	✓	✓	
	Counting Multiples	Step 4 Count in 3s	<b>Step 5 Count in 4s</b>	<b>Step 6 Count in 8s</b>	count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number <b>TYM: p8,10,11</b>
	Counting Fourways	Steps 2, 3, 4 20, 200, 2000, Steps 5 1/4s	<b>Steps 4</b> 1000s	<b>Steps 5, 6</b> 1/10s 0.1s	

	Counting Along	Step 1 I can count along when numbers are written	<b>Step 2</b> <b>I can count along when numbers are not written</b>	Step 2 I can count along when numbers are not written	solve number problems and practical problems involving these ideas.  <b>TYM: p 2-11</b> <b>Number review page – page 130</b>
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<b>Y3</b> <b>LEARN Its</b>  <b>Ready to progress objectives:</b> Secure fluency in addition and subtraction facts that bridge 10, through continued practice;  Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number;  Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).  <u>NCETM:</u> <u>EXEMPLIFICATION SLIDES</u> <u>- READY to PROGRESS</u> <u>OBJECTIVES GUIDANCE</u> to support achieving Ready to Progress criteria (objectives)	<b>Autumn Term</b> <b>Challenge 10</b> <b>LEARN ITS Steps 8, 9, 10 (60 secs)</b>	<b>Spring Term</b> <b>Challenge 11</b> <b>LEARN ITS 9, 10, 11 (60 secs)</b>	<b>Summer Term</b> <b>Challenge 12</b> <b>LEARN ITS 10, 11, 12 (60 secs)</b>	<b>Cross referenced to the NC</b>
Step 10 Multiplication: x3 table Say multiples 1–12 Say x3 tables Jumbled x3 table facts  Fact families x3\÷3	Step 11 (x4) Multiplication: x4 table Say multiples 1–12 Say x4 tables Jumbled x4 table facts Fact families x4\÷4	Step 12 ( x8) Multiplication: x8 table Say multiples 1–12 Say x8 tables Jumbled x8 table facts Fact families x8\÷8	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables  <b>TYM: p33-39</b>	

<b>Y3</b> <b>INN</b>	<b>Progress Drive</b>	<b>Autumn Term</b>	<b>Spring Term</b>	<b>Summer Term</b>
	Pim the Alien	Step 1 I can swap objects	Step 1 I can swap objects	<b>Step 2, 3</b> <b>I can swap amounts</b> <b>I can swap units of measure</b>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>I T S N O T H I N G N E W</b></p>	Adding with Pim	Step 3 I can add thousands	Step 3 I can add thousands	Step 3 I can add thousands
	Doubling without crossing 10	Step 3 I can double 2 digit numbers (double 44 is 88)	<b>Step 4</b> <b>I can double 3 digit multiples of 100 (double 400 is 800)</b>	<b>Step 5</b> <b>I can double 3 digit numbers (double 324 is 648)</b>
	Doubling with crossing 10	Step 3 I can double 2d numbers e.g. (double 26 is 52)	<b>Step 4</b> <b>I can double 3d multiples of 100 (double 600 is 1200)</b>	<b>Step 5</b> <b>I can double 3d numbers (double 645 is 1290)</b>
	& Halving	Step 3 I know half of 300, 500, 700, 900	Step 3 I know half of 300, 500, 700, 900	Step 3 I know half of 300, 500, 700, 900
	Jigsaw Numbers	Step 3 I can find the missing piece to 100	Step 3 I can find the missing piece to 100	Step 3 I can find the missing piece to 100
	x10 ÷10	Step 1 I can multiply whole numbers by 10 Step 1 I can divide multiples of 10 by 10	Step 1 I can multiply whole numbers by 10 Step 1 I can divide multiples of 10 by 10	Step 1 I can multiply whole numbers by 10 Step 1 I can divide multiples of 10 by 10
	Smile multiplication		<b>Steps 1, 2</b> <b>I can multiply multiples of 10</b> <b>I can write Smile Multiplication tables</b>	<b>Step 3</b> <b>I can write Smile Multiplication fact families</b>
	Coin multiplication	Step 2 I can complete a 1,2,5, 10 card	<b>Step 3</b> <b>I can complete a full coin card</b>	Step 3 I can complete a full coin card
	Where's Mully?	Step 1 I can find Mully using my tables	<b>Step 2</b> <b>I can find Mully using 10 lots and a Tables Fact</b>	Step 2 I can find Mully using 10 lots and a Tables Fact
	Pom's Words			
	Fact Families	Step 4 I know the fact families for 1d x 1d facts ( $2 \times 9 = 18$ , $9 \times 2 = 18$ )	Step 4 I know the fact families for 1d x 1d facts ( $2 \times 9 = 18$ , $9 \times 2 = 18$ )	<b>Step 5</b> <b>I know Smile Multiplication fact families</b>

### Y3: CALCULATION

Y3 C A L C U L A T I O N	Progress Drives	<b>Autumn Term</b> <b>BMBT &amp; SAFE 10</b>	<b>Spring Term</b> <b>BMBT &amp; SAFE 11</b>	<b>Summer Term</b> <b>BMBT &amp; SAFE 12</b>	National Curriculum 2014 : Autumn-Spring-Summer: Independent tasks: Use <b>Target Your Maths</b> & <b>MathSphere</b> .
	Addition	<b>Step 25</b> $2d + 2d$	<b>Step 26, 27</b> $3d + 2d$ Any $3d + 2d$	<b>Step 28</b> $3d + 3d$	Add and subtract numbers mentally, including: • a three-digit number and ones <b>TYM p12,20,21</b> • a three-digit number and tens <b>TYM p13</b> • a three-digit number and hundreds <b>TYM P14-19</b>  <b>Target your Maths:</b> <b>p22-23 &amp; 82,83 (with measure)</b>
	Column Method - Addition	<b>Step 2</b> I can solve any $2d + 2d$ <b>TYM p24,25 (some of the page)</b>	<b>Step 3</b> I can solve a $3d + 2d$	<b>Steps 4, 5, 6</b> I can solve any $3d + 2d$ $3d + 3d$ any $3d + 3d$ <b>TYM p 24,25</b>	
	Subtraction	<b>Step 28</b> I can take any $2d$ number from 100	Step 28 I can take any $2d$ number from 100	<b>Step 29</b> I can take 100 from any $3d$ number	add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.  <b>TYM: 85-87,99 (mixture of +/- with measure and £)</b>
	Column Method - Subtraction	Step 2 any $2d - 2d$ <b>TYM p26,27 (some of the page)</b>	<b>Step 3, 4</b> I can solve $3d - 2d$ any $3d - 2d$	<b>Step 5</b> I can solve $3d - 3d$ <b>TYM p26,27</b>	estimate the answer to a calculation and use inverse operations to check answers.  <b>TYM p28,29</b>
	Multiplication	Step 9 I can solve $1d \times 1d$	<b>Step 10</b> I can do Smile Multiplication ( $\times 2,3,4,5$ )	<b>Step 11</b> I can solve $1d \times 2d$ $4 \times 23$	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction  <b>TYM p30-32, 58-60, 100-102, 117</b> <b>Review:</b> <b>TYM p131</b>
	Column Method - Multiplication			<b>Step 1</b> I can solve $2d \times 1d$	write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.  <b>TYM: p40-53</b>
	Division	Step 17 I can use tables facts to find a division fact (with remainders)	Step 17 I can use tables facts to find a division fact (with remainders)	<b>Steps 18, 19</b> I can combine 2 or more tables facts to solve division I can combine 2 or more tables facts to solve division (with remainders)	solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m object  <b>TYM: p131,135</b>
	Column Method – Division			<b>Step 1</b> I can solve $2d \div 1d$ No remainders	

# YEAR 4 MATHS OVERVIEW

	Wk 1 (half week)	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8
Autumn I	Number and Place Value			Number: Addition & Subtraction				
Autumn II	Number: Multiplication & Division						Complete unit Assessments	
Spring I	Numbers: Fractions			Numbers: Decimals				
Spring II	Numbers: Decimals – Length mm/cm cm/m	Measures: Mass & Capacity Move to the last week (wk 6)	Measures: Length, Area & Perimeter (make two weeks)			MID YEAR ASSESSMENT		
Summer I	Numbers: Decimals		Measurement: Money		Measurement: Time		Complete unit Assessments	
Summer II	Statistics	Geometry: Properties of Shape		Geometry: Position and Direction		END OF YEAR ASSESSMENT	Investigations	

The **ready-to-progress** criteria are **non-negotiable goals** for the end of the year. When used at the start of a year, you might want to use the materials and ideas from the previous year group. If you are teaching Year 4 for example, the Year 3 materials are used to review, practice and consolidate learning from the previous year.

## By the end of this unit: (Note: Ready to progress objectives are in purple)

Resources/links	Most children will be able to (Expected)	Some children will be able to (Greater Depth)
<b>Number: Place Value</b>		
Remember to plan for the use of VARIATION, QUESTIONING and STEM SENTENCES. Rehearse, consolidate and reason ideas continuously.  <a href="#">NCETM: NUMBER ADDITION AND SUBTRACTION TEACHING SLIDES Y4</a> to support the planning and teaching of key objectives: composition and calculation – 1000 and 4 digit numbers; tenths and hundredths and thousandths including links with measures and algorithms; addition and subtraction – money.  <a href="#">NCETM: EXEMPLIFICATION SLIDES - READY TO PROGRESS OBJECTIVES GUIDANCE</a> to support achieving Ready to Progress criteria (objectives)  <a href="#">READY TO PROGRESS CRITERIA GUIDANCE</a>	<ul style="list-style-type: none"> <li>• identify, recognise and count in multiples of 6,7,9,25 and 1000;</li> <li>• know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.</li> <li>• recognise the place value of each digit in four-digit numbers and compose and decompose four-digit numbers using standard and nonstandard partitioning.</li> <li>• reason about the location of any four digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.</li> </ul>	<ul style="list-style-type: none"> <li>• solve number patterns involving 6,7,9,25 and 1000;</li> <li>• solve word problems which involve finding 1000 more or less than a given number up to 10 000;</li> <li>• compare numbers beyond 1000 using &gt;, &lt; and = symbols in complex comparison statements;</li> <li>• compare more complex calculations involving numbers beyond 1000 using mathematical symbols;</li> <li>• identify numbers beyond 1000, including 2 decimal places, in different representations;</li> <li>• complete addition and subtraction calculations involving Roman numerals before ordering the answers from smallest to largest;</li> <li>• complete calculations and round each answer to the nearest 10;</li> </ul>

<p><b>to support knowledge and understanding of the Ready to Progress criteria (objectives)</b> Y1 – Y6</p> <p><b><u>WHITE ROSE RESOURCES</u></b></p> <p>to additionally support planning and teaching of key objectives</p> <p>Teachers also have access to <b>Twinkl</b> resources.</p>	<ul style="list-style-type: none"> <li>• compare numbers beyond 1000 using <math>&gt;</math>, <math>&lt;</math> and <math>=</math> symbols in simple comparison statements;</li> <li>• find 1000 more or less than a given number up to 50 000;</li> <li>• order and compare numbers beyond 1000, including simple decimals, in different representations;</li> <li>• estimate and represent 4 and 5 digit numbers using different representations</li> <li>• read and order the Roman numerals up to 100 (1-C) and know that over time, the numeral system changed to include the concept of zero and place value.</li> <li>• <b>divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.</b></li> <li>• find the effect of dividing a one digit or two digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths;</li> <li>• round whole numbers with up to 4 digits to the nearest 10;</li> <li>• round numbers up to 10 000 to the nearest 100 and 1000;</li> <li>• think of 3, 4 or 5 digit numbers that will round to given numbers when rounding to the nearest 1000;</li> <li>• round decimals with one decimal place to the nearest whole number;</li> <li>• count forwards and backwards through zero on horizontal and vertical number lines including negative numbers in intervals of one, 5, 10 and 20;</li> <li>• begin to solve simple problems involving negative numbers in context;</li> <li>• solve number and reasoning problems involving all the above.</li> </ul>	<ul style="list-style-type: none"> <li>• think of five 3 or 4 digit numbers that will round to given numbers when rounding to the nearest 100;</li> <li>• answer problem-solving questions involving rounding numbers to the nearest 1000;</li> <li>• count forwards and backwards through zero on horizontal and vertical number lines including negative numbers in intervals of 1, 5, 20, 50;</li> <li>• solve problems involving negative numbers in context;</li> <li>• solve number and reasoning problems involving all the above.</li> </ul>
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### Number: Addition & Subtraction

	<ul style="list-style-type: none"> <li>• add and subtract numbers with up to four digits using formal written methods of columnar addition and subtraction;</li> <li>• add and subtract numbers with tenths and hundredths;</li> <li>• estimate and use inverse operations to check answers to calculations;</li> <li>• Use the inverse to find missing numbers</li> <li>• count in steps of 1, 10 and 100;</li> <li>• find number bonds to equal 100;</li> <li>• find multiples of 100 to make 1000;</li> <li>• Solve one step problems involving whole numbers and simple decimals;</li> </ul>	<ul style="list-style-type: none"> <li>• add and subtract numbers with mixed decimals;</li> <li>• use the inverse to find missing numbers;</li> <li>• find number bonds to make 1000;</li> <li>• Solve one step problems involving whole numbers and decimals;</li> <li>• Solve two step problems involving whole numbers and decimals.</li> </ul>
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	<ul style="list-style-type: none"> <li>Solve two step problems involving whole numbers and simple decimals.</li> </ul>	
<b>Number: Multiplication and Division</b>		
<a href="#">NCETM: MULTIPLICATION AND DIVISION TEACHING GUIDE Y4</a> to support the planning and teaching of key objectives: connecting multiplication and division – distributive law; times tables $x11$ $x12$ ; division with remainders; multiplying and dividing by 10 and 100; partitioning leading to short multiplication; partitioning leading to short division; multiplicative contexts – perimeter and area; structures – using measures and comparison to understand scaling.	<ul style="list-style-type: none"> <li><b>multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size;</b></li> <li>recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math> with increasing speed and accuracy;</li> <li>begin to calculate multiples of numbers beyond <math>12 \times 12</math>;</li> <li>Know that factor <math>\times</math> factor = product and use this to find factors of a number beginning to understand that factors divide into a number without leaving remainders</li> <li><b>manipulate multiplication and division equations, and understand and apply the commutative property of multiplication;</b></li> <li>use a range of mental calculation strategies for multiplication and division with increasing accuracy including multiplying by 0 and 1, dividing by 1, and multiplying together three numbers;</li> <li>identify and use factor pairs and inverses when solving multiplication and division problems (use commutativity);</li> <li><b>understand and apply the distributive property of multiplication;</b></li> <li>use the expanded method and short method to multiply two-digit and three digit by one digit numbers;</li> <li>calculate using the short written method for division for two-digit and three digit by one-digit numbers, including those with remainders;</li> <li>use partitioning and rounding and adjusting to solve two-digit by one-digit number problems with increasing confidence;</li> <li>use multiplication and division facts to scale up and down;</li> <li>solve division problems involving fractions.</li> <li>solve correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects.</li> </ul>	<ul style="list-style-type: none"> <li>quickly recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math>;</li> <li>calculate multiples of numbers beyond <math>12 \times 12</math>;</li> <li>perform multiplication and division calculations mentally including multiplying by 0 and 1, dividing by 1, and multiplying together three numbers;</li> <li>use factor pairs and inverses accurately when solving multiplication and division problems;</li> <li>use the expanded method and the short method, to multiply two-digit and three-digit by one-digit numbers, with increasing accuracy;</li> <li>calculate accurately using the short written method for division for two-digit and three-digit by one-digit numbers, including those with remainders;</li> <li>use the distributive law, partitioning and re-combining, or rounding and adjusting confidently to solve two-digit by one-digit multiplication problems;</li> <li>use multiplication and division facts within and beyond multiplication tables knowledge to scale up and down;</li> <li>use and devise their own branching diagrams and begin to use multiplication to calculate the number of options when solving correspondence problems;</li> <li>solve division problems involving fractions with confidence.</li> </ul>
<b>Number: Fractions &amp; Decimals</b>		
<a href="#">NCETM: FRACTIONS TEACHING GUIDE Y4</a> to support understanding of fractions: the part =whole relationship; improper and mixed fractions; multiplying whole numbers and fractions.	<ul style="list-style-type: none"> <li>find groups of equivalent fractions using supporting materials;</li> <li>find groups of equivalent fractions by multiplying;</li> </ul>	<ul style="list-style-type: none"> <li>find groups of equivalent fractions by multiplying and dividing;</li> <li>recognise hundredths and count in steps of multiple hundredths;</li> </ul>

	<ul style="list-style-type: none"> <li>• recognise hundredths and count in steps of multiple hundredths using a hundredths square;</li> <li>• <b>reason about the location of mixed numbers in the linear number system;</b></li> <li>• <b>convert mixed numbers to improper fractions and vice versa;</b></li> <li>• add and subtract fractions up to and over one whole using fraction bars;</li> <li>• identify fraction and decimal equivalents for halves, quarters and tenths;</li> <li>• recognize and write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math></li> <li>• <b>add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers;</b></li> <li>• use place value grids to divide by 10 and 100;</li> <li>• draw number lines to round decimals with 1dp and 2dp to the nearest whole number;</li> <li>• compare decimals with same number of decimal places;</li> <li>• solve a variety of problems involving fractions, including money, measures, fractions of quantities and fractions to divide quantities, selecting support where needed.</li> </ul>	<ul style="list-style-type: none"> <li>• add and subtract fractions up to and over one whole;</li> <li>• identify a range of fraction and decimal equivalents including thousandths;</li> <li>• divide any number by 10 and 100;</li> <li>• round decimal numbers to the nearest whole number;</li> <li>• compare decimals with one and two decimal places;</li> <li>• solve problems involving fractions</li> </ul>
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### Measurement: Length, Area, Perimeter

	<ul style="list-style-type: none"> <li>• estimate the length of lines in centimetres, up to one decimal place;</li> <li>• convert between: millimetres, centimetres, metres and kilometres (below 150 units);</li> <li>• compare two measurements of length using <math>&lt;</math>, <math>&gt;</math> or <math>=</math></li> <li>• order mixed units of length measurement with decimal notation;</li> <li>• solve length problems, calculating the difference (kilometres with one decimal place) between two distances – answers up to 120km;</li> <li>• solve length problems, calculating difference;</li> <li>• measure the sides of rectangles and squares in centimetres and add the measurements together to calculate the perimeter;</li> <li>• use a formula to calculate the perimeters of squares in centimetres and metres (multiples of 10);</li> <li>• add given dimensions on scaled rectangles and squares to calculate perimeter in metres (multiples of 5);</li> <li>• use the formula to calculate the perimeters of squares in metres (multiples of five);</li> </ul>	<ul style="list-style-type: none"> <li>• convert between: millimetres, centimetres, metres and kilometres (below 150 units);</li> <li>• measure the sides of rectangles and squares in whole and half centimetres and add the measurements together to calculate the perimeter;</li> <li>• measure the sides of squares in whole and half centimetres and use a formula to calculate the perimeter in centimetres;</li> <li>• use a formula to calculate the perimeters of squares in metres (multiples of 5);</li> <li>• calculate the area of an L-shaped rectilinear shape (shapes made up of four rectangles).</li> </ul>
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	<ul style="list-style-type: none"> <li>calculate the area of rectangles and squares by using arrays and multiplication;</li> <li>calculate the area of an L shaped rectilinear shape (shapes made up of two rectangles).</li> <li>calculate the area of a composite rectilinear shape (shapes made up of three rectangles).</li> </ul>	
<b>Measurement: Mass and Capacity</b>		
	<ul style="list-style-type: none"> <li>estimate the mass of items;</li> <li>order three measurements from smallest to greatest mass;</li> <li>convert gram measurements into kilograms and grams and vice versa; convert: millilitres to litres and millilitres and vice versa;</li> <li>order a set of four mixed mass measurements which contain tenths or hundredths;</li> <li>solve mass problems, calculating difference (answers over 1kg);</li> <li>solve volume and capacity problems involving addition and subtraction;</li> <li>order three volume measurements written in mixed units.</li> </ul>	<ul style="list-style-type: none"> <li>solve problems involving converting between: millilitres and litres,</li> <li>order a range of measurements of mass – grams, kilograms, kilograms and grams;</li> <li>order four volume measurements;</li> <li>solve problems involving converting between: grams and kilograms.</li> </ul>
<b>Measurement: Time</b>		
	<ul style="list-style-type: none"> <li>convert 12-hour times to 24-hour and 24-hour to 12-hour (5 minute intervals);</li> <li>solve time problems which involve conversion from hours and minutes to minutes and vice versa (times 15 minute intervals);</li> <li>convert and compare: years and months; weeks and days; minutes and seconds.</li> </ul>	<ul style="list-style-type: none"> <li>calculate the actual time where the times shown on clocks are fast or slow;</li> <li>solve simple problems involving conversion of digital and analogue times;</li> <li>solve time problems which involve conversion from hours and minutes to minutes and vice versa (times minute intervals);</li> <li>calculate the difference between two ages;</li> </ul>
<b>Measurement: Money</b>		
	<ul style="list-style-type: none"> <li>record pence (less than a pound) using a £ sign and subtract single pence from whole pounds;</li> <li>add together up to three money amounts which have 99p in them (e.g. £14.99) – totals up to £25.</li> <li>convert money amounts written in pence to decimal notation, e.g. 547p = £5.47 and vice versa (less than £30);</li> <li>order four money amounts, some written in pence, some in decimal form.</li> </ul>	<ul style="list-style-type: none"> <li>convert money amounts written in pence to decimal notation, e.g. 547p = £5.47 and vice versa (less than £30);</li> <li>order five money amounts, some written in pence, some in decimal form.</li> </ul>

## Statistics

- collect data in a tally chart;
- collate data into a frequency table;
- create simple bar charts and pictograms;
- create scaled bar charts and pictograms;
- create Venn and Carroll diagrams;
- create a table of information;
- ask and answer one-step and two-step questions about charts, tables and diagrams.

## Geometry: Properties of Shapes

- **Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant;**
- describe the properties of 3D shapes using the vocabulary faces, edges and vertices.
- recognise angles as a property of shape or a description of a turn and identify right angles.
- recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn.
- identify whether angles are greater than or less than a right angle.
- identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

## Geometry: Position & direction

- |  |   |  |
|--|---|--|
|  | <ul style="list-style-type: none"> <li>• read and write a coordinate in the first quadrant;</li> <li>• translate an object or shape horizontally then vertically on a 2D grid.</li> </ul> | <ul style="list-style-type: none"> <li>• read, write and plot coordinates in the first quadrant;</li> <li>• translate an object or shape on a 2D grid by writing a more complex set of instructions;</li> <li>• plot specified points to complete a given polygon or picture.</li> </ul> |
|--|---|--|

**Number and Place Value/CLIC** \*Target your Maths = TYM

Y4 C O U N T I N G	Progress Drive	Autumn Term <b>BMBT &amp; SAFE 13</b>	Spring Term <b>BMBT &amp; SAFE 14</b>	Summer Term <b>BMBT &amp; SAFE 15</b>	Cross Referenced to the NC
	Saying Numbers	✓	✓	✓	find 1000 more or less than a given number <b>TYM pg 8</b>
	Reading Numbers	Step 6 I can read 3d numbers	Step 6 I can read 3d numbers	Step 6 I can read 3d numbers	identify, represent and estimate numbers using different representations <b>TYM pgs 2-3</b>
	Squiggleworth	<b>Step 4 I can partition a 2dp number</b>	Step 4 I can partition a 2dp number	Step 4 I can partition a 2dp number	recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) <b>TYM pg 4</b>
	CORE Numbers (compare, order, round, estimate)	<b>Step 5 I can understand 4d numbers</b>	<b>Step 6 I can understand 1dp numbers</b>	<b>Step 7 I can understand 2dp numbers</b>	order and compare numbers beyond 1000; <b>TYM pg 5</b> round any number to the nearest 10, 100 or 1000 <b>TYM pgs 10,11</b>
	Counting Skills	✓	✓	✓	count backwards through zero to include negative numbers <b>TYM pg 9</b>
	Actual Counting	✓	✓	✓	
	Counting on	✓	✓	✓	
	Counting Multiples	<b>Steps 7, 8, 9 I can count in 6's I can count in 7's I can count in 9's</b>	✓	✓	count in multiples of 6, 7, 9, 25 and 1000 <b>TYM pgs 6,7</b>
	Counting Fourways	<b>Steps 1, 2, 3, 4 25s, 250s, 2500s, 2.5s</b>	<b>Step 6 0.1s, 0.2s, 0.5s, 0.25s (Link with 1/10s, 1/5s, 1/2s, 1/4s Step 5)</b>	<b>Step 5 1/5s</b>	<b>TYM pgs 65,78</b>
	<b>Step 3 I can still count along for all of 'Count Fourways' challenges</b>	<b>Step 4 I can even count along when there are no lines</b>	Step 4 I can even count along when there are no lines	read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value <b>TYM pgs 12,13</b> <b>Number Review page - page 138</b> solve number and practical problems that involve all of the above and with increasingly large positive numbers <b>TYM pgs 2 -11</b>	

<b>Y4</b> <b>LEARN Its</b>	<b>Autumn Term</b> <b>Challenge 13</b> <b>Steps 11, 12, 13</b> <b>(60 secs)</b>		<b>Summer Term</b> <b>Challenge 15</b> <b>Steps 13, 14, 15</b> <b>(30 secs)</b>	<b>Cross referenced to the NC</b>
<p><b>Ready to progress objectives:</b></p> <p><b>Recall multiplication and division facts up to <math>12 \times 12</math>, and recognise products in multiplication tables as multiples of the corresponding number.</b></p> <p><b>Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.</b></p> <p><b>Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)</b></p> <p><b>NCETM: EXEMPLIFICATION SLIDES - READY to PROGRESS OBJECTIVES GUIDANCE</b> to support achieving Ready to Progress criteria (objectives)</p>	<p><b>Step 13</b> <b>Multiplication: The 6 fact challenge</b> 6x6, 6x7, 7x7, 9x6, 9x7, 9x9 <b>x6, x7, x9 tables</b> Say x6, x7, x9 tables Jumbled x6, x7, x9 tables Fact families <math>\times\div 6, 7, 9</math></p>	<p><b>Step 14</b> <b>Multiplication: X 11 table</b> Say multiples 1–12 Say x11 tables Jumbled x11 tables Fact families <math>\times\div 11</math></p>	<p><b>Step 15</b> <b>Multiplication: X 12 table</b> Say multiples 1–12 Say x12 tables Jumbled x12 tables Fact families <math>\times\div 12</math></p>	recall multiplication and division facts for multiplication tables up to $12 \times 12$ <b>TYM pgs 32-39</b>

	<b>Progress Drive</b>	<b>Autumn Term</b>	<b>Spring Term</b>	<b>Summer Term</b>
<b>Y4 INNING</b>	Pim the Alien	✓	✓	✓
	Adding with Pim	Step 3 I can add thousands	<b>Step 4 I can add tenths</b>	Step 4 I can add tenths
	Doubling without crossing 10 Doubling with crossing 10 & Halving	✓	✓	✓
		✓	✓	✓
	Step 3 I know half of 300, 500, 700, 900	<b>Step 4 I know half of 3,5,7,9 as decimals</b>	<b>Step 5, 6 I can halve any 2d number I can halve any 3d number</b>	
		Step 4 I can find the missing piece to 1000	Step 4 I can find the missing piece to 1000	Step 4 I can find the missing piece to 1000
	X10 ÷ 10	<b>Step 2 I can multiply whole numbers by 100</b>	Step 2 I can multiply whole numbers by 100	Step 2 I can multiply whole numbers by 100
		Step 1 I can divide multiples of 10 by 10	<b>Step 2 I can divide whole numbers by 10 or 100 giving decimal answers</b>	<b>Step 2 I can divide whole numbers by 10 or 100 giving decimal answers</b>
	Smile Multiplication	Step 3 I can write Smile Multiplication fact families	Step 3 I can write Smile Multiplication fact families	Step 3 I can write Smile Multiplication fact families
	Coin Multiplication	Step 3 I can complete a full coin card	<b>Step 4 I know when to add 2 multiples together</b>	Step 4 I know when to add 2 multiples together
	Where's Mully?	Step 2 I can find Mully using 10 lots and a Tables Fact	Step 2 I can find Mully using 10 lots and a Tables Fact	<b>Step 3 I can find Mully using Smile Multiplication</b>
	Pom's Words			<b>Steps 1 and 2 I can find multiples I can find factors</b>
	Fact Families	✓	✓	✓

#### Y4 CALCULATION

	<b>Progress Drives</b>	<b>Autumn Term CLIC</b>	<b>Spring Term CLIC</b>	<b>Summer Term CLIC</b>	<b>National Curriculum</b>
<b>Y4 CALCUL</b>	Addition	Step 28 I can solve 3d +3d	<b>Step 29 I can solve any 3d + 3d</b>	<b>Step 30, 31 I can solve 3d + 3d as money I can solve any 3d + 3d as money</b>	<i>Non Statutory guidance</i> <i>Practise mental methods with increasingly large numbers</i> <b>TYM pgs 14-21, 102, 103</b> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <b>TYM pgs 22-27,99</b> estimate and use inverse operations to check answers to a calculation <b>TYM pgs 28 -31</b>
	Column Method - Addition	<b>Step 6 I can solve any 3d + 3d TYM pgs 22-27,99</b>	<b>Step 7 I can solve any 4d + 2d or 3d</b>	<b>Steps 8 I can solve any 4d + 4d</b>	
	Subtraction	Step 29 I can subtract with 3 digit numbers	Step 29 I can subtract with 3 digit numbers	<b>Step 30 I can solve 3d – 2d</b>	

A T I O N	<p>Column Method - Subtraction</p>	<p><b>Step 6 : I can solve any 4d – 2d or 3d</b></p>	<p>Step 6 : I can solve any 4d – 2d or 3d</p>	<p><b>Step 7 I can solve any 4d – 4d</b></p>	<p>solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why <b>TYM pgs 56-59</b> <b>Calculation review page – addition and subtraction page 139</b></p>
	Multiplication	<p><b>Step 12,13 (6,7, 8 and 9 Times Tables)</b> <b>I can solve any 1d x 1d</b> <b>I can do any Smile Multiplication</b></p>	<p><b>Step 14 (6,7, 8 and 9 Times Tables)</b> <b>I can solve any 1d x 2d</b></p>	<p>Step 14 (6, 7, 8, 9 Times Tables) I can solve any 1d x 2d</p>	<p>recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math> <b>TYM pgs 32-39</b></p>
	Column Method - Multiplication	<p>Step 1 I can solve <math>2d \times 1d</math> <b>TYM pgs 48,49, 54, 100</b></p>	<p><b>Step 2 I can solve any 2d x 1d</b> <b>TYM pgs 48,49, 54, 100</b></p>	<p><b>Step 3 I can solve any 3d x 1d</b></p>	<p>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 <b>TYM pgs 40, 41, 45, 62</b></p>
	Division	<p>Step 19 (2, 3, 4 and 5 Times Tables) I can combine 2 or more tables facts to solve division (with remainders)</p>	<p>Step 19 (2, 3, 4 and 5 Times Tables) I can combine 2 or more tables facts to solve division (with remainders)</p>	<p><b>Steps 20, 21, 22, 23 (6, 7, 8 and 9 Times Tables)</b> <b>I can use a tables fact to find a division fact;</b> <b>I can use a tables fact to find a division fact (with remainders);</b> <b>I can combine 2 or more tables facts to solve division;</b> <b>I can combine 2 or more tables facts to solve division (with remainders);</b></p>	<p>recognise and use factor pairs and commutatively in mental calculations <b>TYM pgs 46,47</b></p>
	Column Method - division	<p><b>Step 2 I can solve <math>2d \div 1d</math> (using 2, 3, 4, 5)</b> <b>No remainders in answer</b> <b>TYM pgs 50-54,101</b></p>	<p>Step 2 I can solve <math>2d \div 1d</math> (using 2, 3, 4, 5) No remainders in answer</p>	<p><b>Step 3, 4 ,5</b> <b>I can solve <math>2d \div 1d</math> (using any table)</b> <b>No remainders in answer;</b> <b>TYM pgs 50-54,101</b> <b>I can solve <math>3d \div 1d</math> (using any table)</b> <b>No remainders in answer;</b> <b>TYM pgs 50-54,101</b> <b>I can solve <math>4d \div 1d</math> (using any table)</b> <b>No remainders in answer.</b> <b>TYM pgs 50-54,101</b></p>	<p>multiply two-digit and three-digit numbers by a one-digit number using formal written layout <b>TYM pgs 48,49, 54, 100</b></p> <p>solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects <b>TYM pgs 55 -61, 63, 102, 103</b></p> <p><b>Calculation review pages –139, 143</b></p>

# YEAR 5 MATHS OVERVIEW

	Wk 1 (half week)	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8
Autumn I	Number: Place Value			Number: Addition & Subtraction			Statistics	
Autumn II	Number: Multiplication & Division		Perimeter & Area			Complete unit Assessments		
Spring I	Number: Multiplication & Division		Number: Fractions					
Spring II	Number: Fractions		Number: Decimals & Percentages		MID YEAR ASSESSMENT			
Summer I	Number: Decimals		Geometry: Properties of Shapes			Complete unit Assessments		
Summer II	Measurement: Position & Direction	Measurement: Converting Units	Measurement: volumes	FINAL YEAR ASSESSMENT	Investigations			

The **ready-to-progress** criteria are **non-negotiable goals** for the end of the year. When used at the start of a year, you might want to use the materials and ideas from the previous year group. If you are teaching Year 4 for example, the Year 3 materials are used to review, practice and consolidate learning from the previous year.

## By the end of this unit: **(Note: Ready to progress objectives are in purple)**

Resources/links	Most children will be able to (Expected)	Some children will be able to (Greater Depth)
<b>Number: Place Value</b>		
<b>Remember to plan for the use of VARIATION, QUESTIONING and STEM SENTENCES. Rehearse, consolidate and reason ideas continuously.</b>  <u><a href="#">NCETM: NUMBER ADDITION AND SUBTRACTION TEACHING SLIDES Y5</a></u> to support the planning and teaching of key objectives: composition and calculation – multiples of 1000 up to 1 000 000; negative numbers – counting comparing and calculating; common structures and the part-part whole relationship; using equivalence and the compensation property to calculate (eg increasing and decreasing addends and minuends).  <u><a href="#">NCETM: EXEMPLIFICATION SLIDES - READY to PROGRESS OBJECTIVES GUIDANCE</a></u>	<ul style="list-style-type: none"> <li>• read and write numbers up to 1 000 000;</li> <li>• identify the value of each digit in a number up to 1 000 000;</li> <li>• identify the value of a digit in numbers with two decimal places;</li> <li>• order numbers up to 1 000 000;</li> <li>• compare numbers using the greater than and less than symbols;</li> <li>• know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01;</li> <li>• recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents;</li> <li>• Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning;</li> </ul>	<ul style="list-style-type: none"> <li>• read and write numbers up to 10 000 000; • identify the value of each digit in a number up to 10 000 000;</li> <li>• identify the value of a digit in numbers with three decimal places;</li> <li>• order numbers up to 10 000 000;</li> <li>• compare numbers by working out calculations; • round numbers to a required degree of accuracy;</li> <li>• calculate intervals across zero;</li> <li>• solve problems involving negative numbers in context;</li> <li>• solve reasoning problems using all of the above;</li> <li>• solve trickier reasoning problems involving place value, rounding and negative numbers.</li> </ul>

<p>to support achieving Ready to Progress criteria (objectives)</p> <p><b><u>READY TO PROGRESS CRITERIA</u></b> <b><u>GUIDANCE</u></b></p> <p>to support knowledge and understanding of the Ready to Progress criteria (objectives) Y1 – Y6</p> <p><b>WHITE ROSE RESOURCES</b> to additionally support planning and teaching of key objectives</p> <p>Teachers also have access to <b>Twinkl</b> resources.</p>	<ul style="list-style-type: none"> <li>• round numbers to the nearest 10, 100, 1000, 10 000 or 100 000;</li> <li>• count backwards and forwards with positive and negative integers, across zero using a number line;</li> <li>• calculate intervals across zero using a number line;</li> <li>• compare and order negative numbers using a number line;</li> <li>• solve simple problems involving negative numbers in context;</li> <li>• count forwards and backwards in steps of powers of 10 for any given number up to 1,000,000;</li> <li>• reason about the location of any number with up to 2 decimal places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each;</li> <li>• round decimals with two decimal places to the nearest whole number and to one decimal place;</li> <li>• read Roman numerals up to 1000 (M) (use a symbols chart);</li> <li>• identify years written in Roman numerals;</li> <li>• Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts;</li> <li>• solve simple reasoning problems using all of the above;</li> <li>• convert between units of measure, including using common decimals and fractions.</li> </ul>	
<b>Number: Addition &amp; Subtraction</b>		
	<ul style="list-style-type: none"> <li>• add and subtract numbers mentally with increasingly large numbers;</li> <li>• add and subtract using a columnar method;</li> <li>• add and subtract numbers with at least 5 digits;</li> <li>• round numbers to nearest 10, 100, 1000 and 10 000;</li> <li>• use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy;</li> <li>• solve addition and subtraction multi-step problems in contexts, deciding which operation and method to use and why.</li> </ul>	<ul style="list-style-type: none"> <li>• add larger numbers with decimal notation</li> <li>• round numbers to the nearest 10, 100, 1000, 10 000 and 100 000;</li> <li>• suggest alternate ways to solve puzzles and problems</li> </ul>
<b>Statistics</b>		

	<ul style="list-style-type: none"> <li>• complete, read and interpret data presented in tables, including timetables and in a line graph;</li> <li>• answer comparison, sum and difference questions about data presented in a line graph and a double line graph;</li> <li>• interpret information in a range of tables;</li> <li>• answer question about information presented in times table, applying their knowledge of time.</li> </ul>	<ul style="list-style-type: none"> <li>• interpret data presented in a straight-line graph</li> <li>• answer comparison, sum and difference; questions about data presented in a straight-line graph;</li> <li>• complete missing information in tables;</li> <li>• answer more complex questions about information presented in tables.</li> </ul>
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### Number: Multiplication and Division

<p><a href="#"><u>NCETM: MULTIPLICATION AND DIVISION TEACHING GUIDE Y5</u></a></p> <p><b>to support the planning and teaching of key objectives: using equivalence to calculate; calculating <math>\times/\div</math> decimal fractions by whole numbers; multiplication with three factors and volume; factors multiples, prime numbers and composite numbers; combining multiplication with addition and subtraction.</b></p>	<ul style="list-style-type: none"> <li>• Know factor x factor = product;</li> <li>• recognise the multiples and factors of numbers and begin to find the common factors of two numbers;</li> <li>• <b>Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size;</b></li> <li>• find factor pairs confidently and identify the common factors of two or more numbers;</li> <li>• <b>Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors., eg,<math>48 = 2 \times 3 \times 8</math>;</b></li> <li>• identify and recall the prime numbers up to 20 and be able to find the prime numbers up to 100 using their multiplication tables knowledge;</li> <li>• know and use the vocabulary of prime numbers, prime factors and composite (non prime) numbers;</li> <li>• <b>multiply any whole number with up to 4 digits by any one-digit number using a formal written method (short multiplication);</b></li> <li>• multiply and divide numbers mentally using known facts e.g. doubling, halving, partitioning and recombining and beginning to use known facts to multiply and divide decimals;</li> <li>• Divide a number with up to 4 digits by a one-digit number using a formal written method (short division) and interpret remainders appropriately for the context.</li> <li>• Interpret remainders as whole numbers, decimals and simple fractions and begin to choose the best way to express remainders, depending on the context of the problem;</li> <li>• multiply and divide whole numbers and those involving decimals by 10, 100 and 1000;</li> <li>• identify and use square numbers, cube numbers and the notation for squared and cubed (powers);</li> <li>• recognise that the equals sign indicates equivalence and make equations balance;</li> </ul>	<ul style="list-style-type: none"> <li>• identify the common factors and prime factors of numbers;</li> <li>• recall the prime numbers up to 20 and find prime numbers up to and beyond 100 using their multiplication tables knowledge;</li> <li>• multiply numbers up to 4 digits by 1- or 2-digit numbers using short and long multiplication accurately and confidently;</li> <li>• multiply and divide numbers mentally using known facts e.g. doubling, halving, partitioning and recombining and using known facts to multiply and divide decimals;</li> <li>• use the formal method of short division to divide numbers up to 4 digits by a one-digit number.</li> <li>Interpret remainders as whole numbers, decimals and fractions. Choose from these in order to express remainders appropriately depending on the context;</li> <li>• multiply and divide whole numbers and those involving decimals by 10, 100 and 1000;</li> <li>• recognise and use square numbers, cube numbers and powers;</li> <li>• calculate square and cube roots through trial and improvement;</li> <li>• recognise that the equals sign indicates equivalence and make equations that balance using all four operations;</li> <li>• use and apply their mental and written multiplication and division methods to solve problems involving speed, distance and time, scaling and exchange rate money problems.</li> </ul>
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	<ul style="list-style-type: none"> <li>solve a wide range of multiplication and division problems, including those with addition and multiplication, applying their mental and written methods including scaling, exchange rate and speed problems and those involving factors, multiples, cubes and squares.</li> </ul>	
<b>Measurement: Length, Perimeter &amp; area</b>		
	<ul style="list-style-type: none"> <li>calculate the perimeter of composite rectilinear shapes in centimetres and metres, with all sides given and by calculating the length of any unknown sides;</li> <li>estimate the area of irregular shapes by counting whole and half squares</li> <li><b>Compare areas and calculate the area of rectangles (including squares) using standard units (square centimetres and metres), multiplying the length by the width, using times tables;</b></li> <li>estimate the area of irregular shapes;</li> <li>use a given formula to calculate the perimeter of rectangles</li> <li>choose a formula to calculate the perimeter of rectangles</li> </ul>	<ul style="list-style-type: none"> <li>given the area and one measurement, calculate the length of the unknown side of a rectangle;</li> </ul>
<b>Number: Fractions</b>		
<u><a href="#">NCETM: FRACTIONS TEACHING GUIDE Y5</a></u> <b>to support finding equivalent fractions and simplifying fractions; finding the common denominator; adding and subtracting fractions.</b>	<ul style="list-style-type: none"> <li>compare and order fractions using a fraction wall and multiplication to find equivalent fractions;</li> <li>compare and order fractions whose denominators are all multiples of the same number;</li> <li>identify name and write equivalent fractions of a given fraction represented visually, including tenths and hundredths;</li> <li><b>find equivalent fractions and understand that they have the same value and the same position in the linear number system;</b></li> <li>read and write decimal numbers as fractions ( eg <math>0.71 = 71/100</math> )</li> <li><b>find non-unit fractions of quantities;</b></li> <li>identify equivalent improper fractions and mixed numbers using diagrams to support;</li> <li>convert between improper fractions and mixed numbers to add and subtract fractions with the same denominator;</li> <li>add and subtract proper fractions with different denominators;</li> <li>multiply proper fractions or mixed numbers by whole numbers by drawing diagrams;</li> <li><b>recall decimal fraction equivalents for <math>1/2</math> , <math>1/4</math> , <math>1/5</math> , <math>1/10</math> , <math>1/100</math> and for multiples of these proper fractions;</b></li> </ul>	<ul style="list-style-type: none"> <li>compare and order fractions using multiplication and division to find equivalent fractions;</li> <li>convert between improper fractions and mixed numbers;</li> <li>convert between improper fractions and mixed numbers to add and subtract fractions with different denominators;</li> <li>multiply proper fractions or mixed numbers by whole numbers;</li> </ul>
<b>Number: Decimals &amp; percentages</b>		

	<ul style="list-style-type: none"> <li>use place value to convert between decimal and fraction tenths and thousandths;</li> <li>compare and order numbers with up to three decimal places when they have the same and different numbers of decimal places;</li> <li>round a number with two decimal places to the nearest whole number and nearest tenth (one decimal place) using a number line to support;</li> <li>understand percent (%) and that it relates to 'number of parts per hundred' and write percentages as a fraction with a denominator hundred and as a decimal;</li> <li>give percentage and decimal equivalents for half, quarters, fifths tenths, twentieths, twenty-fifths, fiftieths and hundredths fractions and fractions with a denominator of a multiple of 10 or 25.</li> <li>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.</li> <li>solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those with a denominator of a multiple of 10 or 25;</li> <li>solve problems involving numbers up to three decimal places.</li> </ul>	<ul style="list-style-type: none"> <li>round a number with two decimal places to the nearest whole number and nearest tenth.</li> </ul>
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### Measurement: Time

	<ul style="list-style-type: none"> <li>convert 12 hour times to 24 hour times and 12 hour times to 24 hour (5 minute intervals);</li> <li>convert between minutes and seconds using whole number measurements up to 1 decimal place;</li> <li>solve simple problems involving conversions of time units, including interpreting timetables;</li> <li>calculate the days and weeks or just days from one date to another.</li> </ul>	<ul style="list-style-type: none"> <li>convert 12 hour times to 24 hour times and 12 hour times to 24 hour (1 minute intervals);</li> <li>solve more complex problems involving conversions of time units, including interpreting timetables.</li> </ul>
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### Geometry: Properties of Shapes

	<ul style="list-style-type: none"> <li>identify regular and irregular 2D shapes;</li> <li>reason about 2D shapes (irregular and regular polygons) based on reasoning about equal sides and angles;</li> <li>identify the nets of a range of 3D shapes (ie 2D representations);</li> <li>estimate and compare acute, obtuse and reflex angles;</li> <li>know angles are measured in degrees and measure angles using a protractor;</li> <li><b>compare angles, estimate and measure angles in degrees (<math>^{\circ}</math>) and draw angles of a given size;</b></li> <li>begin to draw angles using a protractor;</li> </ul>	<ul style="list-style-type: none"> <li>calculate missing angles or lengths of 2D shapes using known facts;</li> <li>draw nets of 3D shapes;</li> <li>accurately draw angles using a protractor;</li> <li>calculate missing angles.</li> </ul>
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	<ul style="list-style-type: none"> <li>• find angles on a straight line and half a turn (180 degrees) and other multiples of 90 degrees.</li> <li>• find angles at a point and one whole turn (360 degrees).</li> <li>• use the properties of rectangles to deduce related facts and find missing lengths and angles.</li> </ul>	
<b>Geometry: Position &amp; direction</b>		
	<ul style="list-style-type: none"> <li>• recognise reflective symmetry;</li> <li>• translate a shape knowing that it does not change shape.</li> <li>• identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language.</li> </ul>	<ul style="list-style-type: none"> <li>• identify missing coordinates of a translated shape;</li> <li>• identify missing coordinates of a reflected shape.</li> </ul>
<b>Measurement: Converting units</b>		
	<ul style="list-style-type: none"> <li>• use their knowledge of place value and multiplication and division to convert between standard units such as multiplying and dividing by 1000, 100, 10 eg grams, kilograms; kilometres, metres; centimetres. metres; centimetre, millimetres, centimetres; litres, millilitres;</li> <li>• convert between metric units of length, recording using decimal notation up to 2 decimal places;</li> <li>• convert between metric units of mass and volume , recording using decimal notation up to 3 decimal places;</li> <li>• order and compare measurements given in mixed units;</li> <li>• solve simple problems involving conversion of metric units of measure including reading timetables;</li> <li>• understand and use the equivalences between metric units and common imperial units such as inches, pounds and pints;</li> <li>• use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</li> <li>• solve reasoning -style problems involving conversions of time units, including interpreting timetables.</li> </ul>	<ul style="list-style-type: none"> <li>• convert between metric and imperial units of measure such as inches, pounds and pints, using approximate conversions;</li> <li>• understand and use equivalences metric units and common imperial units;</li> <li>• solve more complex problems involving conversion of metric units of measure;</li> <li>• solve reasoning-style problems involving conversion of metric units of measurement.</li> </ul>
<b>Measurement - volumes</b>		
	<ul style="list-style-type: none"> <li>• estimate the capacity of containers</li> <li>• estimate volume of cubes and cuboids eg using 1cm<sup>3</sup> (cubed) blocks to build cuboids, including cubes and estimate capacity eg using water.</li> </ul>	<ul style="list-style-type: none"> <li>• use all four operations to solve problems involving volume, using decimal notation including scaling.</li> </ul>

**Number and Place Value/CLIC \*Target your Maths = TYM**

Y5	Progress Drive	Autumn Term <b>BMBT &amp; SAFE16</b>	Spring Term <b>BMBT&amp;SAFE 17</b>	Summer Term <b>BMBT&amp;SAFE 18</b>	Cross referenced to the NC
	Saying Numbers	✓	✓	✓	
C O U N T I N G	Reading Numbers	<b>Step 7, 8, 9</b> <b>I can read 6,5,4 digit numbers</b>	<b>Step 10, 11</b> <b>I can read 9,8,7 digit numbers</b> <b>I can read each digit with decimal places</b>	✓	<ul style="list-style-type: none"> <li>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 <b>TYM pg6</b></li> <li>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals <b>TYM pg 10-11</b></li> </ul>
	Squiggleworth	Step 4 I can partition a 2dp number	Step 4 I can partition a 2dp number	<b>Steps 5</b> <b>I can partition a 3dp number</b>	
	CORE Numbers (compare, order, round, estimate)	Step 7 I can understand 2dp numbers	Step 7 I can understand 2dp numbers	<b>Step 8, 9</b> <b>I can understand 3, 5, 7, 8 digit numbers</b>	<ul style="list-style-type: none"> <li>Read, write, order and compare numbers to at least 1 000 000 <b>TYM pg2-5</b></li> <li>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 <b>TYM pg 7</b></li> <li>Determine the value of each digit in numbers up to 1 000 000 <b>TYM pg2-5</b></li> </ul>
	Counting Skills	✓	✓	✓	
	Actual Counting	✓	✓	✓	
	Counting on	✓	✓	✓	
	Counting Multiples	✓	✓	✓	
	Counting Fourways	<b>Step 7</b> -1s	<b>Step 7</b> -2s,-5s	<b>Step 7</b> -25s	<ul style="list-style-type: none"> <li>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero <b>TYM pg8-9</b></li> </ul>
	Counting Along	Step 4 I can even count along when there are no lines	<b>Step 5</b> <b>I can count along any number line</b>	<b>Step 6</b> <b>I can find the gap between 2 negative numbers</b>	Solve number problems and practical problems that involve <b>TYM pg 2-9</b>

Y5  No new LEARN Its  Ready to progress objectives:  Secure fluency in multiplication table facts, and corresponding division	Autumn Term <b>ULTIMATE Challenge (90 secs)</b>	Spring Term <b>ULTIMATE Challenge (90 secs)</b>	Summer Term <b>ULTIMATE Challenge (60 secs)</b>	Cross referenced to the NC
	72 LEARN ITS jumbled up each week (All 36 '1 digit add 1 digit' Learn Its and all 36 '1 digit times 1 digit' Learn Its.)	72 LEARN ITS jumbled up each week (All 36 '1 digit add 1 digit' Learn Its and all 36 '1 digit times 1 digit' Learn Its.)	72 LEARN ITS jumbled up each week (All 36 '1 digit add 1 digit' Learn Its and all 36 '1 digit times 1 digit' Learn Its.)	recall multiplication and division facts for multiplication tables up to $12 \times 12$ <b>TYM pgs 32-39</b>

<p>facts, through continued practice.</p> <p>Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).</p> <p><u>NCETM:</u>  <u>EXEMPLIFICATION SLIDES</u>  <u>-READY to PROGRESS</u>  <u>OBJECTIVES GUIDANCE</u></p> <p>to support achieving Ready to Progress criteria (objectives)</p>	<p>Once a child can write down all 72 answers in less than 90 seconds, try 60 secs.</p>	<p>Once a child can write down all 72 answers in less than 90 seconds, try 60 secs.</p>	<p>Once a child can write down all 72 answers in less than 90 seconds, try 60 secs.</p>	
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Y5 INN	Progress Drive	Autumn Term <b>BMBT &amp; SAFE 16</b>	Spring Term <b>BMBT&amp; SAFE 17</b>	Summer Term <b>BMBT&amp;SAFE 18</b>	Cross referenced to the NC
I	Pim the Alien	✓	✓	✓	
T	Adding with Pim	Step 5 I can add hundredths	✓	✓	
S	Doubling & Halving	✓	✓	✓	
N	Jigsaw Numbers	Step 5 find the missing decimal piece	✓	✓	
O	X10 / - 10	Step 3/3 I can multiply decimals by 10/ divide decimals by 10	Step 4/4 I can multiply decimals by 100/ divide decimals by 100	Step 5/5 I can multiply whole numbers and decimals by 1000	<ul style="list-style-type: none"> <li>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</li> </ul> <b>TYM: 33,84,85,102</b>
H	Smile multiplication	Step 4 I can do smile multiplication for tenths	Step 5 I can do smile multiplication for hundredths	✓	<ul style="list-style-type: none"> <li>Identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers</li> </ul>
I	Coin multiplication	Step 4 I know when to add 2 multiples together	Step 5 I know when to add 3 multiples together	✓	<ul style="list-style-type: none"> <li>Identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers</li> </ul>
N	Where's Mully?	Step 4 I can find Mully using SM and table facts	Step 5 I can find Mully using Coin Multiplication	✓	<ul style="list-style-type: none"> <li>TYM pg 24,25</li> </ul>
E					
W					

	Pom's Words	Step 2 I can find factors	Step 3 <b>I understand square numbers</b>	Step 4 <b>I understand prime numbers</b>	<ul style="list-style-type: none"> <li>Establish whether a number up to 100 is prime and recall prime numbers up to 19 <b>TYM pg 26,27</b></li> <li>Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) <b>TYM pg 34,35</b></li> </ul>
	Fact Families	✓	✓	✓	

## Y5 CALCULATION

Y5	Autumn Term <b>BMBT &amp; SAFE 16</b>	Spring Term <b>BMBT 17</b>	Summer Term <b>BMBT 18</b>	National Curriculum
Addition	<b>Step 32, 33</b> I can solve 1dp + 1dp I can solve any 1dp + 1dp	<b>Step 34, 35</b> I can solve 1d.1dp + 1d.1dp I can solve any 1d.1dp + 1d.1dp	<b>Step 36, 37, 38</b> I can solve additions with 2dp I can solve any additions with 2dp I can solve additions with larger numbers	<u><b>Addition and Subtraction:</b></u> Add and subtract numbers mentally with increasingly large numbers <b>TYM pg 12-14,22,23,109</b> Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) <b>TYM pg 15-17,104-106</b> <ul style="list-style-type: none"> <li>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy <b>TYM pg 18-19</b></li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why <b>TYM pg 20,21</b></li> </ul> <u><b>Multiplication and Division:</b></u> <ul style="list-style-type: none"> <li>Multiply and divide numbers mentally drawing upon known facts <b>TYM pg 29-32</b></li> <li>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 <b>TYM pg 41-48</b></li> <li>Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes <b>TYM pg 28,52,128</b></li> <li>Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign <b>TYM pg 49-51,88-90,103,148</b></li> <li>Solve problems involving multiplication and division including scaling by simple fractions and problems involving simple rates <b>TYM pg 61-64,96-97</b></li> </ul>
Column Method +	step 8 I can solve any 4d + 4d	<b>Step 9</b> I can use column addition for several numbers	<b>Step 10</b> I can solve any 5d + 5d	
Subtraction	<b>Step 31</b> I can solve 4d-2d	<b>Step 32, 33</b> I can solve 3d -3d I can solve 3d -3d as money	<b>Step 34, 35, 36</b> I can subtract numbers with hundredths I can subtract numbers with tenths I can solve any whole number subtractions with large numbers	
Column Method - Subtraction	Step 7 I can solve any 4d - 4d	<b>Step 8</b> I can solve any 5d-5d	Step 8 I can subtract numbers with 1dp	
Multiplication	Step 14 I can solve any 1d x 2d	<b>Step 15,16</b> I can solve 1dx3d	Step 16 I can show my understanding of 2d x 2d	
Column Method - Multiplication	<b>Step 4</b> I can solve any 2dx2d	<b>Step 5</b> I can solve any 3dx2d	<b>Step 6</b> I can solve any 4d x 1d	
Division	<b>Step 24, 25</b> I can use a Smile Multiplication fact to find a division fact I can use a Smile Multiplication fact to find a	<b>Step 26, 27</b> I can combine a Smile Multiplication fact with a tables fact to solve division I can combine a Smile Multiplication fact with a tables fact to solve division with remainders	<b>Step 28, 29, 30, 31</b> I can use coin fact to find a division fact I can use a coin fact to find a division fact with remainders I can combine 2 or more coin facts to solve division	

	<b>division fact with remainders</b>		<b>I can combine 2 or more coin facts to solve division with remainders</b>	
Column Method – division	Step 5 I can solve a $4d \div 1d$	Step 6 I can solve any $2d \div 1d$ (and $3d \div 1d$ ) with remainders	Step 7 I can solve any $4d \div 1d$ and interpret context of remainders	

# YEAR 6 MATHS OVERVIEW

	Wk 1 (half week)	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8
Autumn I	Number: Place Value	Number: Addition; Subtraction	Number: Multiplication	Number: Division	Number: Fractions	Half termly assessment (1)		
Autumn II	Number: Fractions		Number: Decimals	Number: Percentages	Geometry: Position and Direction	Half termly assessment (2)		
Spring I	Number: Percentages	Number: Algebra	Measurement: Perimeter, Area and Volume			Half termly assessment (2)		
Spring II	Converting Units Measurement:	Number: Ratio and proportion		Statistics	Half termly assessment (4)			
Summer I	Geometry: Properties of Shapes .	Problems Solving / SATs preparation & Investigations						
Summer II	Consolidation, investigations and preparation for KS3							

The **ready-to-progress** criteria are **non-negotiable goals** for the end of the year. When used at the start of a year, you might want to use the materials and ideas from the previous year group. If you are teaching Year 4 for example, the Year 3 materials are used to review, practice and consolidate learning from the previous year.

## By the end of this unit: (Note: Ready to progress objectives are in purple)

Resources/links	Most children will be able to (Expected)	Some children will be able to (Greater depth)
<b>Number: Place Value</b>		
<p>Remember to plan for the use of VARIATION, QUESTIONING and STEM SENTENCES. Rehearse, consolidate and reason ideas continuously.</p> <p><a href="#">NCETM: NUMBER ADDITION AND SUBTRACTION TEACHING GUIDE Y6</a> to support the planning and teaching of key objectives: composition and calculation – numbers up to 10 000 000; problems with two unknowns.</p> <p><a href="#">NCETM: EXEMPLIFICATION SLIDES - READY to PROGRESS OBJECTIVES GUIDANCE</a> to support achieving</p>	<ul style="list-style-type: none"> <li>• understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).</li> <li>• read and write numbers up to 10 000 000;</li> <li>• recognise the place value of each digit in numbers up to 10 million, including decimal fractions with one, two and three decimal places, and compose and decompose numbers up to 10 million using standard and nonstandard partitioning;</li> <li>• order numbers up to 10 000 000;</li> </ul>	<ul style="list-style-type: none"> <li>• read and write numbers up to 10 000 000;</li> <li>• identify the value of each digit in a number up to 10 000 000;</li> <li>• identify the value of a digit in numbers with three decimal places;</li> <li>• order numbers up to 10 000 000;</li> <li>• compare numbers by working out calculations;</li> <li>• round numbers to a required degree of accuracy;</li> <li>• calculate intervals across zero;</li> <li>• solve problems involving negative numbers in context;</li> <li>• solve reasoning problems using all of the above;</li> </ul>

<p><b>Ready to Progress criteria (objectives)</b></p> <p><b>READY TO PROGRESS CRITERIA</b></p> <p><b>GUIDANCE</b></p> <p>to support knowledge and understanding of the Ready to Progress criteria (objectives) Y1 – Y6</p> <p><b>WHITE ROSE RESOURCES</b></p> <p>to additionally support planning and teaching of key objectives</p> <p>Teachers also have access to <b>Twinkl</b> resources.</p>	<ul style="list-style-type: none"> <li>• compare numbers using the greater than and less than symbols;</li> <li>• round numbers to the nearest 10, 100, 1000, 10 000 or 100 000;</li> <li>• round decimals with two decimal places to the nearest whole number;</li> <li>• reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts;</li> <li>• count backwards and forwards across zero using a number line;</li> <li>• compare and order negative numbers using a number line;</li> <li>• solve simple problems involving negative numbers in context;</li> <li>• count forwards and backwards in steps of powers of 10;</li> <li>• divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts;</li> <li>• read Roman numerals up to 1000 (M);</li> <li>• identify years written in Roman numerals using a symbols chart;</li> <li>• solve simple reasoning problems using all of the above.</li> </ul>	<ul style="list-style-type: none"> <li>• solve trickier reasoning problems involving place value, rounding and negative numbers.</li> </ul>
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### Number: Addition & Subtraction

	<ul style="list-style-type: none"> <li>• understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number);</li> <li>• perform one-step mental calculations with increasingly large numbers;</li> <li>• practise mental calculations with increasingly large numbers using all four operations and mixed operations;</li> <li>• use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding;</li> <li>• solve reasoning questions involving mental addition, subtraction, multiplication and division;</li> <li>• perform two-step mental calculations with increasingly large numbers;</li> </ul>	<ul style="list-style-type: none"> <li>• create their own word problems involving addition, subtraction, multiplication and division;</li> <li>• solve multi-step problems and check their answer using estimation;</li> <li>• sort and solve one, two and multi-step problems in a Venn diagram;</li> <li>• solve complex multi-step problems.</li> </ul>
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	<ul style="list-style-type: none"> <li>• add and subtract numbers, including decimals, using a formal written method;</li> <li>• identify missing brackets within a calculation;</li> <li>• correctly use the order of operations to carry out calculations involving the four operations;</li> <li>• find missing numbers using the inverse;</li> <li>• solve two-step problems and check their answer using estimation;</li> <li>• round numbers to a specified degree of accuracy, taking into account the context;</li> <li>• sort one and two-step problems in a Venn diagram;</li> <li>• solve multi-step problems involving addition and subtraction.</li> </ul> <p><b>•solve problems with two unknowns.</b></p>	
<b>Number: Multiplication and Division</b>		
<p><a href="#"><b>NCETM: MULTIPLICATION AND DIVISION TEACHING GUIDE Y6</b></a></p> <p>to support the planning and teaching of key objectives: multiplication strategies for larger numbers and long multiplication; dividing by 2 digit divisors; using compensation to calculate; mean average and equal squares; scale factors, ratio and proportional reasoning; combining division with addition and subtraction; decimal place value knowledge, multiplication and division; multiplicative contexts – area and perimeter.</p>	<ul style="list-style-type: none"> <li>• understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number);</li> <li>• use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding;</li> <li>• multiply multidigit numbers up to four digits by a two-digit number using short and long multiplication;</li> <li>• divide using a formal written method and use rounding depending on the context;</li> <li>• solve two-step multiplication and division problems, using reasoning and rounding the answer depending on the context;</li> <li>• divide four-digit numbers by a two-digit number using short division with and without remainders;</li> <li>• divide four-digit numbers (with decimals) by a two-digit number using short division; interpret remainders as whole number remainders, fractions or by rounding, as appropriate for the context;</li> <li>• associate a fraction with division and calculate decimal fraction equivalents (eg 0.375) for a simple fraction (eg 3/8);</li> </ul> <p><b>•solve problems with two unknowns.</b></p>	<ul style="list-style-type: none"> <li>• solve missing digit problems involving long multiplication;</li> <li>• divide using a formal written method and use rounding depending on the context in multi-step calculations;</li> <li>• solve missing digit problems involving long division;</li> <li>• create comparison sentences involving long division calculations;</li> </ul>

<b>Number: Fractions</b>		
<b><u>NCETM: FRACTIONS TEACHING GUIDE Y6</u></b> to support multiplying and dividing fractions by a whole number; linking fractions, decimals and percentages.	<ul style="list-style-type: none"> <li>• recognise when fractions can be simplified, and use common factors to simplify fractions;</li> <li>• identify common factors, common multiples and prime numbers;</li> <li>• express fractions in a common denomination and use this to order fractions that are similar in value. (use fraction walls and part whole models as support)</li> <li>• compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denominator as a comparison strategy;</li> <li>• add and subtract fractions with unlike denominators using the method of finding a common denominator</li> <li>• multiply proper fractions or mixed numbers by whole numbers using resources to support</li> <li>• divide a fraction by a whole number that is a divisor or the numerator;</li> <li>• divide a fraction by a whole number</li> </ul>	<ul style="list-style-type: none"> <li>• compare and order fractions using the method of finding a common denominator</li> <li>• subtract fractions with unlike denominators using regrouping</li> <li>• divide a proper fraction by another proper fraction</li> </ul>
<b>Geometry: Position &amp; direction</b>		
	<ul style="list-style-type: none"> <li>• describe coordinate positions in all four quadrants;</li> <li>• translate shapes on coordinate axes using coordinate translation; using the vocabulary left, right, up and down;</li> <li>• reflect and draw shapes over mirror lines.</li> <li>• reflect and draw shapes on coordinate axes.</li> </ul>	<ul style="list-style-type: none"> <li>• describe coordinate positions in all four quadrants, including using decimal half coordinates;</li> <li>• translate shapes on coordinate axes using coordinate translation, and identify missing vertices;</li> <li>• reflect and draw shapes on coordinate axes and identify missing vertices.</li> </ul>
<b>Number: Decimals</b>		
	<ul style="list-style-type: none"> <li>• identify the value of each digit in numbers given to three decimal places;</li> <li>• round a number with 3 decimal places to a specified degree of accuracy (use a number line to support) when problem solving;</li> <li>• use fractions, percentages and decimal equivalents to solve problems</li> </ul>	<ul style="list-style-type: none"> <li>• use written methods of division to calculate decimal equivalents of fractions</li> </ul>

	<ul style="list-style-type: none"> <li>• multiply one digit numbers with up to two decimal places by whole numbers.</li> <li>• multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places.</li> <li>• Use written division methods in cases where the answer has up to two decimal places.</li> </ul>	
<b>Number: Percentages</b>		
	<ul style="list-style-type: none"> <li>• understand percent (%) and give percentage and decimal equivalents for half, quarters, fifths, tenths, twentieths, twenty-fifths, fiftieths and hundredths fractions.</li> <li>• calculate any percentage of a numbers including money up to 10 000;</li> <li>• convert percentages to numbers in a pie chart.</li> </ul>	<ul style="list-style-type: none"> <li>• calculate any percentage of a numbers including money over 1 000 000.</li> </ul>
<b>Number: Algebra</b>		
	<ul style="list-style-type: none"> <li>• use simple formulae.</li> <li>• use of symbols and letters to represent variables and unknowns in mathematical situations that they already understand, such as: missing numbers, lengths, coordinates and angles and recognising when it is possible to use formulae for area and volume of shapes;</li> <li>• generate and describe linear number sequences.</li> <li>• use bar models to represent and help to solve simple problems;</li> <li>• express missing number problems algebraically eg number puzzles (eg, what two numbers can add up to).</li> <li>• find pairs of numbers that satisfy an equation with two unknowns.</li> <li>• enumerate possibilities of combinations of two variables - list all possible answers using a systematic approach.</li> <li>• find a rule – one step.</li> <li>• write algebraic expressions using standard notation</li> <li>• calculate an answer by substituting in known variables</li> </ul>	<ul style="list-style-type: none"> <li>• use simple formulae to answer algebraic word problems - solve simple one step equations.</li> <li>• solve two step equations.</li> <li>list all possible answers to a combination problem that involves finding multiples of two different variables</li> <li>• find a rule – two step.</li> <li>• break down complex problems into smaller steps when solving reasoning problems</li> </ul>
<b>Measurement: Converting units</b>		
	<ul style="list-style-type: none"> <li>• convert from larger to smaller metric units of length, mass and volume, up to two decimal places;</li> <li>• convert units of time – whole, half, quarter and three-quarter units;</li> </ul>	<ul style="list-style-type: none"> <li>• solve more complex problems involving conversion and calculation of metric units of length, mass and volume;</li> <li>• calculate the difference between negative and positive temperatures within a range of 60°;</li> </ul>

	<ul style="list-style-type: none"> <li>convert from larger to smaller metric units of length, mass and volume, up to three decimal places;</li> <li>convert units of time – whole and half units;</li> <li>convert from smaller to larger metric units of length, mass and volume, up to three decimal places;</li> <li>solve reasoning style problems involving conversion and calculation of metric units of length, mass and volume;</li> <li>calculate the difference between negative and positive temperatures within a range of <math>40^{\circ}</math>;</li> <li>create and use conversion graphs to convert between miles and kilometres (multiples of five units);</li> </ul>	<ul style="list-style-type: none"> <li>create and use conversion graphs to convert between miles and kilometres (multiples of one unit);</li> </ul>
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### Measurement: Perimeter, area & volume

	<ul style="list-style-type: none"> <li>find all possible rectangles and squares with a given area using <math>\text{cm}^2</math> and <math>\text{mm}^2</math>;</li> <li>find all possible rectangles and squares with a given perimeter, using cm and mm;</li> <li>recognize that shapes with the same area can have different perimeters;</li> <li>use a formula to calculate the area of triangles up to <math>200\text{cm}^2</math>;</li> <li>use a formula to calculate the area of parallelograms up to <math>600\text{cm}^2</math>;</li> <li>identify shapes which have enough information to use a formula to calculate the area of squares, rectangles and composite shapes;</li> <li>subdivide two composite rectilinear shapes to calculate area, some with unknown side measurements;</li> <li>calculate the volume of cubes and cuboids, using measurements of cubic centimetres and cubic metres (up to one decimal place).</li> </ul>	<ul style="list-style-type: none"> <li>find all possible rectangles and squares with a given perimeter, using m and mm;</li> <li>use a formula to calculate the area of triangles over <math>200\text{cm}^2</math>, including half units;</li> <li>use a formula to calculate the area of parallelograms up to <math>3000\text{cm}^2</math>, including half units;</li> <li>calculate the volume of cubes and cuboids, using measurements of cubic centimetres and cubic metres (up to one decimal place).</li> </ul>
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### Number: Ratio and proportion

.	<ul style="list-style-type: none"> <li>enlarge a simple shape by a given whole and fractional number scale factor;</li> <li>calculate the length of missing sides after enlargement on simple shapes;</li> </ul>	<ul style="list-style-type: none"> <li>calculate the length of missing sides after enlargement on simple and composite shapes;</li> <li>calculate the surface area of an enlarged cuboid;</li> </ul>
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|  | <ul style="list-style-type: none"> <li>enlarge a cuboid to a given scale factor;</li> <li>solve fraction problems either with fractions in the problem or using fractions to solve the problem, where there are several steps required to answer the problem;</li> <li>solve problems involving relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.</li> <li>write a ratio statement to compare two values;</li> <li>write a ratio in its simplest form;</li> <li>recognise and write equivalent ratios; calculate 5%, 10% 15% and multiples of 10% of quantities and measures (eg 15% of 360) and use percentages for comparison.</li> <li><b>solve problems involving ratio relationships (one step and two step problems);</b></li> <li>solve one-step and two-step problems involving calculating proportion;</li> <li>solve problems involving similar shapes where the scale factor is known or can be found.</li> <li>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</li> </ul> | <ul style="list-style-type: none"> <li>solve fraction problems either with fractions in the problem or using fractions to solve the problem, using a higher level of reasoning to answer the problem;</li> <li>solve multi-step problems involving calculating ratio;</li> <li>solve multi-step problems involving calculating proportion;</li> <li>compare sets of data on two pie charts;</li> </ul> |
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### Geometry: Properties of Shapes

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|--|--|---|
|  | <ul style="list-style-type: none"> <li>draw 2D shapes to given dimensions of length and angle;</li> <li><b>draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems;</b></li> <li>construct a 3D shape from a given shape net;</li> <li>recognise, draw and build their own net of a simple 3D shape including construction tabs;</li> </ul> | <ul style="list-style-type: none"> <li>confidently use a protractor to accurately draw 2D shapes to within <math>1^\circ</math> of the given dimensions;</li> <li>draw their own net of more complex 3D shapes including construction tabs;</li> <li>use more complex reasoning to work out missing angles in 2D shapes and around a point or on a straight line;</li> <li>understand the relationship between radius and diameter using algebraic representation.</li> </ul> |
|--|--|---|

	<ul style="list-style-type: none"> <li>compare and classify geometric shapes based on their properties and sizes;</li> <li>measure and calculate unknown angles in triangles, quadrilaterals and regular polygons;</li> <li>recognise different types of angles where they meet at a point, are on a straight line, or vertically opposite, and find missing angles;</li> <li>illustrate and name parts of circles including radius and diameter and circumference and know that the diameter is twice the radius.</li> </ul> <p>Draw circles using a pair of compasses.</p>	
<b>Statistics</b>		
	<ul style="list-style-type: none"> <li>interpret data presented in pie charts, a line graph and a double line graph;</li> <li>construct pie charts and line graphs and use these to solve problems;</li> <li>answer comparison, sum and difference questions about data presented in a line graph and a double line graph;</li> <li>interpret information in a range of tables;</li> <li>answer questions about information presented in timetables, applying their knowledge of time.</li> <li>calculate and interpret the mean as an average.</li> </ul>	<ul style="list-style-type: none"> <li>interpret data presented in a straight-line graph;</li> <li>answer comparison, sum and difference questions about data presented in a straight-line graph;</li> <li>complete missing information in tables;</li> <li>answer more complex questions about information presented in tables.</li> </ul>

### Number and Place Value/CLIC \*Target your Maths = TYM

Y6	Progress Drive	Autumn Term BMBT & SAFE 19	Cross referenced to NC  <b>Spring Term: BMBT 20 Platinum challenge</b> <b>Summer Term: BMBT 20 Platinum challenge</b>
C O U N T	Saying Numbers	✓	
	Reading Numbers	✓	<ul style="list-style-type: none"> <li>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 <b>5N1 TYM pg2-3</b></li> <li>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals <b>5N3b</b></li> </ul>
	Squiggleworth	✓	
	CORE Numbers (compare, order, round, estimate)	<b>Step 10</b> <b>I can understand numbers with different decimal places</b>	<ul style="list-style-type: none"> <li>Read, write, order and compare numbers to at least 1 000 000 <b>5N2 TYM pg4</b></li> <li>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 <b>5N4 TYM pg6,51,52</b></li> <li>Determine the value of each digit in numbers up to 1 000 000 <b>5N3a TYM pg5</b></li> </ul>
	Counting Skills	✓	
	Actual Counting	✓	
	Counting on	✓	

Counting Multiples	✓	
Counting Fourways	✓	<ul style="list-style-type: none"> <li>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero <b>5N5 TYM pg7-8, 86-89</b></li> </ul>
Counting Along	Step 7 I can count in -2	
		<ul style="list-style-type: none"> <li>Solve number problems and practical problems that involve 5N1–5N5 <b>5N6 TYM pg9</b></li> </ul>

**LEARN Its - (No new Learn Its, only revision)**

<b>Y6</b> <b>Ready to progress objectives - revise year 5 objectives:</b>  <b>Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.</b>  <b>Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).</b>  <u><a href="#">NCETM: EXEMPLIFICATION SLIDES - READY to PROGRESS OBJECTIVES GUIDANCE</a></u> to support achieving Ready to Progress criteria (objectives)
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	Progress Drive	Autumn Term	Cross referenced to NC
INN Y6 (Its Nothing New)	Pim the Alien	✓	<ul style="list-style-type: none"> <li>Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places <b>6F9a TYM pg53-55</b></li> </ul>
	Adding with Pim		
	Doubling & Halving	✓	<ul style="list-style-type: none"> <li>Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places <b>6F9b TYM: 56-59</b></li> </ul>
	Jigsaw Numbers	✓	
	X10 / - 10	✓	Identify common factors, common multiples and prime numbers <b>6C5 TYM pg34-35</b>
	Smile multiplication	✓	
	Coin multiplication	✓	
	Where's Mully?	✓	
	Pom's Words	✓	
	Fact Families	✓	

## CALCULATION

Y6 Progress Rives	CLIC	National Curriculum
CALCULATION	Addition	<p><b>Step 39, 40, 41</b>  <b>I can solve additions with several number</b>  <b>I can solve 2dp + 1dp</b>  <b>I can solve any 2dp + 1dp</b></p>
	Column Method - Addition	<p><b>Step 11, 12, 13, 14</b>  <b>I can add numbers with 1dp</b>  <b>I can add numbers with 2dp</b>  <b>I can add numbers with 3dp</b>  <b>I can add numbers with mixed amounts of decimal places</b></p>
	Subtraction	<p><b>Step 37</b>  <b>I can subtract numbers with different decimal places</b></p>
	Column Method - Subtraction	<p><b>Step 9, 10, 11, 12</b>  <b>I can subtract numbers with 1dp</b>  <b>I can subtract numbers with 2dp</b>  <b>I can subtract numbers with 3dp</b>  <b>I can subtract numbers with mixed amounts of decimal places</b></p>
	Multiplication	<p><b>Step 17, 18</b>  <b>I can solve any 1dx1d.1dp</b>  <b>I can solve any 1dx1d.2dp</b>  <b>I can show my understanding for 2dx3d</b></p>
	Column Method - Multiplication	<p><b>Step 8, 9, 10, 11</b>  <b>I can solve any 1d.1dp×1d</b>  <b>I can solve any 1d.2dp×1d</b>  <b>I can solve any 1d.1dp×2d</b>  <b>I can solve any 1d.2dp×2d</b></p>
	Division	<p><b>Step 32, 33</b>  <b>I can use table fact to find a decimal division fact</b>  <b>I can combine 2 or more tables facts to solve decimal division</b></p>
	Column Method – Division	<p><b>Step 8, 9, 10</b>  <b>I can solve any 3d÷2d</b>  <b>I can solve any 4d÷2d and show remainder</b>  <b>I can solve division with decimal places in the answer</b></p>
	<p><b>Addition and Subtraction:</b></p> <ul style="list-style-type: none"> <li>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy <b>6C3 TYM pg23</b></li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why <b>6C4 TYM pg154-155</b></li> <li>Perform mental calculations, including with mixed operations and large numbers <b>6C6 TYM pg33</b></li> <li>Add and subtract: <b>TYM pg10, 32, 94, 95</b></li> </ul> <p><b>Multiplication and Division:</b></p> <ul style="list-style-type: none"> <li>Multiply multi-digit numbers up to 4 digits by a two-digit whole number.</li> <li>Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. <b>TYM pg11-15, 26-31</b></li> <li>Divide numbers up to 4 digits by a two-digit number and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. <b>TYM pg15-20</b></li> <li>Solve problems involving addition, subtraction, multiplication and division <b>6C8 TYM pg38-39</b></li> <li>Use their knowledge of the order of operations to carry out calculations involving the four operations <b>6C9 TYM pg36-37</b></li> <li><b>M and D-</b> <b>TYM pg21, 22, 26-31</b></li> </ul> <p>Fractions</p> <ul style="list-style-type: none"> <li>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination <b>6F2 TYM pg40-41</b></li> <li>Compare and order fractions, including fractions &gt;1 <b>6F3 TYM pg43</b></li> <li>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions <b>6F4 TYM pg42, 44-45</b></li> <li>Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. <math>1/4 \times 1/2 = 1/8</math>) <b>6F5a TYM pg46</b></li> <li>Divide proper fractions by whole numbers (e.g. <math>1/3 \div 2 = 1/6</math>) <b>6F5b TYM pg47</b></li> <li>Associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. <math>3/8</math>) <b>6F6 TYM pg49</b></li> <li>Use written division methods in cases where the answer has up to two-decimal places <b>6F9c</b></li> <li>Solve problems which require answers to be rounded to specified degrees of accuracy <b>6F10 TYM pg24, 25</b></li> <li>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts <b>6F11 TYM pg62-64</b></li> </ul>	