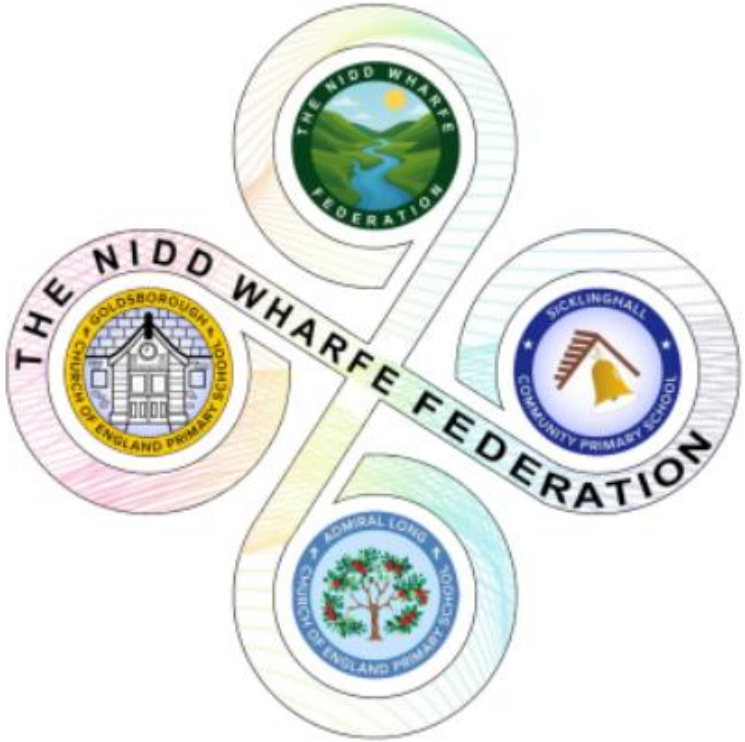
THE NIDD WHARFE FEDERATION
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GOLDSBOROUGH CHURCH OF ENGLAND PRIMARY SCHOOL
SICKLINGHALL COMMUNITY PRIMARY SCHOOL
ADMIRAL LONG CHURCH OF ENGLAND PRIMARY SCHOOL

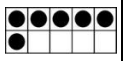
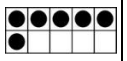
Maths LTP

- Consolidation weeks to be planned according to End of Unit assessments and the children's needs.
- Reasoning skills threaded throughout yearly MTP overviews
- Assessment weeks to take place at three points in the year, planned out according to the school year.
- Calculation methods to be used for each year group, based on the policy.

EYFS (Sweet Chestnut/Cherry Blossom/Class 1)

EYFS to use WRM alongside NCETM Mastering Number principles.

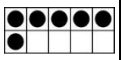
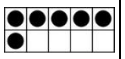
		1	2	3	4	5	6	7	8	9	10	11	12
Autumn	EYFS	Match, sort and compare		Comparing measures and exploring patterns		It's me 1,2,3		Circles and triangles		1,2,3,4,5		Shapes with Four sides	
Spring		Alive in 5		Mass and capacity	Growing 6,7,8		Length, height and time		Building 9 and 10			Explore 3D shapes	
Summer		To 20 and beyond		How many now?	Manipulate, compose and decompose		Sharing and grouping		Visualise, build and map			Make connections	Consolidation

EYFS	Real-life objects	0-9 digit cards	Number line to 20	Numbered Counting stick	Tens frame 		Interlocking cubes - Use one colour to represent one amount		Part-part-whole mat	Bar model with real life objects	Bead strings - 10	Numicon shapes	Double sided counters	Multilink – use one colour to model an amount
Year 1	Real-life objects	0-9 digit cards	Number line to 20	Counting stick	Tens frame 	Place value charts – Tens and ones	Interlocking cubes - Use one colour to represent one amount	Place value arrow cards – tens and ones	Part-part-whole mat	Bar model with real life objects/pictorial objects/representative objects eg. counters	Bead strings - 20	Numicon shapes	Double sided counters	Multilink – use one colour to model an amount

Years 1/2 (Cherry Blossom and Sweet Chestnut)

		1	2	3	4	5	6	7	8	9	10	11	12
Autumn	Year 1	Place Value (Within 10)					Addition and Subtraction (Within 10)					Shape	Consolidation*
	Year 2	Place Value					Addition and Subtraction					Shape	
Spring	Year 1	Place Value (within 20)			Addition and Subtraction (within 20)			Place Value (Within 50)			Length and Height		Mass and Volume
	Year 2	Money			Multiplication and division				Length and Height			Mass, Capacity and Temperature	
Summer	Year 1	Multiplication and division			Fractions		Position & Direction	Place Value (within 100)			Money	Time	Consolidation*
	Year 2	Statistics			Fractions			Position and direction			Consolidation*	Time	

Year 1/2 Progression in Manipulatives –

Year 1	Real-life objects	0-9 digit cards	0-9 cards	Number line to 20	Counting stick	Tens frame 	Place value charts – Tens and ones	Interlocking cubes - Use one colour to represent one amount	Place value arrow cards – tens and ones	Part-part-whole mat	Bar model with real life objects/pictorial objects/representative objects eg. counters	Bead strings - 20	Numicon shapes	Double sided counters	Multilink – use one colour to model an amount
Year 2	Real-life objects	0-9 digit cards	0-9 cards	Number line to 100	Counting stick	Tens frame 	Place value charts – Hundreds, tens and ones	Base 10	Place value arrow cards – tens and ones	Part-part-whole mat	Bar model with counters /Base 10 progressing to numbers	Bead strings - 100	Numicon shapes	Double sided counters	Multilink – use one colour to model an amount

Years 3/4 (Silver Birch and Sycamore)

		1	2	3	4	5	6	7	8	9	10	11	12
Autumn	Year 3	Place Value			Addition and subtraction					Multiplication and Division			
	Year 4	Place Value				Addition and subtraction			Measure: Area	Multiplication and Division			Consolidation*
Spring	Year 3	Multiplication and Division			Measure: Length and perimeter			Fractions			Measure: Mass and capacity		
	Year 4	Multiplication and Division			Measure: Length and perimeter		Fractions				Decimals		
Summer	Year 3	Fractions		Measure: Money		Measure: Time			Shape		Statistics		Consolidation*
	Year 4	Decimals		Measure: Money		Measure: Time		Consolidation*	Shape		Statistics	Position and direction	

Year 3/4 Progression in Manipulatives –

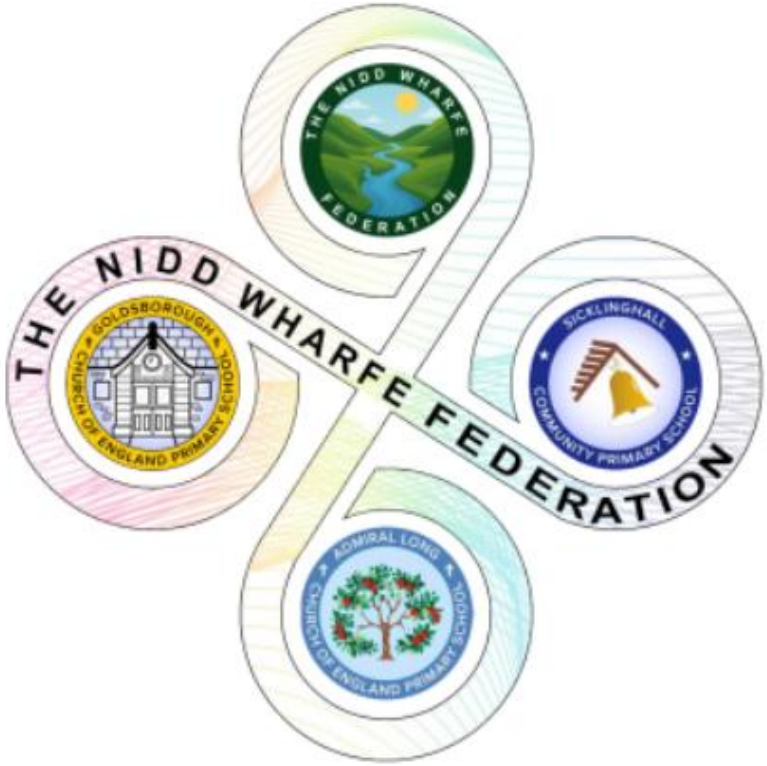
Year 3	Real-life objects	0-9 digit cards	0-9 cards	Number line to 100	Counting stick	Place value charts – Thousands, hundreds, tens and ones	Base 10	Place value counters	Place value arrow cards – H, T, O	Part-part-whole model	Bar model with numbers	Bead strings - 100	Numicon shapes	Cuisenaire rods	Double sided counters	Multilink – use one colour to model an amount
Year 4	Real-life objects	0-9 digit cards	0-9 cards	Number line including negative numbers	Counting stick	Place value charts – Ten thousands, thousands, hundreds, tens, ones and tenths	Base 10	Place value counters	Place value arrow cards – Th, H, T, O	Part-part-whole model.	Bar model with numbers	Bead strings - 100	Numicon shapes	Cuisenaire rods	Double sided counters	Multilink – use one colour to model an amount

Years 5/6 (Oak and Willow)

<table>
<tr><td></td><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr>
<tr><td rowspan="2">Autumn</td><td>Year 5</td><td colspan="3">Place Value</td><td colspan="2">Addition & Subtraction</td><td colspan="3">Multiplication and Division</td><td colspan="4">Fraction A</td></tr>
<tr><td>Year 6</td><td colspan="2">Place Value</td><td colspan="5">Four Operations</td><td colspan="2">Fractions A</td><td colspan="2">Fractions B</td><td>Converting Units</td></tr>
<tr><td colspan="14"></td></tr>
<tr><td rowspan="2">Spring</td><td>Year 5</td><td colspan="3">Multiplication and Division</td><td colspan="2">Fractions B</td><td colspan="3">Decimals and percentages</td><td colspan="3">Perimeter and Area</td><td colspan="2">Statistics</td></tr>
<tr><td>Year 6</td><td colspan="2">Ratio</td><td colspan="2">Algebra</td><td colspan="2">Decimals</td><td colspan="3">Fractions, decimals and percentages</td><td colspan="3">Area, perimeter and volume</td><td colspan="2">Statistics</td></tr>
<tr><td colspan="14"></td></tr>
<tr><td rowspan="3">Summer</td><td rowspan="2">Year 5</td><td colspan="3">Shape</td><td colspan="2">Position and direction</td><td colspan="3">Decimals</td><td colspan="2">Negative numbers</td><td colspan="2">Converting Units</td><td>Volume</td></tr>
<tr><td colspan="6">Summer 1 - KIRF: I can recall square numbers up to 12^2 and their square roots.</td><td colspan="8">Summer 2 - KIRF: I can find factor pairs of a number</td></tr>
<tr><td>Year 6</td><td colspan="3">Shape</td><td>Position and Direction</td><td colspan="3">SATS preparation, based on the QLA</td><td colspan="3">Revision: Calculation</td><td colspan="3">Revision: Measures</td><td colspan="2">Revision: Geometry</td></tr>
</table>

Year 5/6 Progression in Manipulatives –

Year 5	Real-life objects	0-9 digit cards	Number line including negative numbers	Counting stick	Place value charts- to a million and 3dp.	Base 10	Place value counters	Place value arrow cards.	Part-part-whole model	Bar model with numbers	Bead strings - 100	Numicon shapes	Cuisenaire rods	Double sided counters	Multilink – use one colour to model an amount
Year 6	Real-life objects	0-9 digit cards	Number line including negative numbers	Counting stick	Place value charts – to 10 million and 3dp.	Base 10	Place value counters	Place value arrow cards.	Part-part-whole model.	Bar model with numbers	Bead strings - 100	Numicon shapes	Cuisenaire rods	Double sided counters	Multilink – use one colour to model an amount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Maths MTP

EYFS (Sweet Chestnut/Cherry Blossom/Wild Cherry)

EYFS to use the WRM scheme alongside some of the NCETM Mastering Number resources, depending on the cohort.

	Autumn	**Spring**	**Summer**
Number (Mastering Number resources – full coverage of ELG and DM)	Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison. Pupils will: • Identify when a set can be subitised and when counting is needed • Subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • Make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • Spot smaller numbers 'hiding' inside larger numbers	Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals. Pupils will: • Continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals • Begin to identify missing parts for numbers within 5 • Explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame • Focus on equal and unequal groups when comparing numbers • Understand that two equal groups can be called a 'double' and connect this to finger patterns	Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice. Pupils will: • Continue to develop their counting skills, counting larger sets as well as counting actions and sounds • Explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • Compare quantities and numbers, including sets of objects which have different attributes • Continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2 • Begin to generalise about 'one more than' and 'one less than' numbers within 10

	• Connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • Hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number • Develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds • Compare sets of objects by matching • begin to develop the language of 'whole' when talking about objects which have parts	• Sort odd and even numbers according to their 'shape' • Continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern • Order numbers and play track games • Join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers	• Continue to identify when sets can be subitised and when counting is necessary • Develop conceptual subitising skills including when using a rekenrek
WRM MTP	**Match, sort and compare** **Reasoning Thread:** ***What comes next*** • Match objects • Match pictures and objects • Identify a set • Sort objects to a type	**Alive in 5** **Reasoning Thread:** ***Missing Numbers*** • Introduce 0 • Find 0 to 5	**To 20 and Beyond** **Reasoning Thread:** ***True or False*** • Build numbers to 10 (10-13) • Continue patterns beyond 10 (10-13) • Build numbers beyond 10 (14-20)

	• Explore sorting techniques • Create sorting rules • Compare amounts **Talk about measure and patterns** **Reasoning Thread:** ***Odd one out*** • Comparing size • Comparing Mass • Comparing capacity • Comparing simple patterns • Copy and continue simple patterns • Create simple patterns **NRICH SUGGESTION:** The Voting Station (maths.org) **It's Me 1, 2, 3** **Reasoning Thread:** ***Odd one out*** • Find 1, 2, and 3 • Subitise 1,2 and 3 • Represent 1, 2, and 3 • 1 more • 1 less • Composition of 1,2 and 3 • **NRICH SUGGESTION:** Incey Wincey | NRICH **Circles and triangles** **Reasoning Thread:** ***Missing Answers***	• Subitise 0 to 5 • Represent 0 to 5 • 1 more • 1less • Composition • Conceptual subitising to 5 • **NRICH PROBLEM:** Number Book | NRICH **Mass and capacity** **Reasoning Thread:** ***True or False*** • Compare mass • Find a balance • Explore capacity • Compare capacity **NRICH PROBLEM:** Golden Beans (maths.org) **Growing 6, 7, 8** **Reasoning Thread:** ***True or False*** • Find 6, 7, 8 • Represent 6, 7, 8 • 1 more • 1 less • Composition of 6, 7 and 8 • Make pairs – odd and even • Double to 8 (find double) • Double to 8 (Make a double) • Combine 2 groups • Conceptual subitising • **NRICH PROBLEM:** Tidying | NRICH	• Continue patterns beyond 10 (14-20) • Verbal counting beyond 20 • Verbal counting patterns **NRICH PROBLEM:** Counting Collections | NRICH **How many now?** **Reasoning Thread:** ***True or False*** • Add more • How many did I add? • Take away • How many did I take away? **NRICH PROBLEM:** The Voting Station | NRICH **Manipulate, compose decompose** **Reasoning Thread:** ***Odd one out*** • Select shapes for a purpose • Rotate shapes • Manipulate shapes • Explain shape arrangements • Compose shapes • Decompose shapes • Copy 2D shape pictures • Find 2D shapes within 3D shapes **NRICH PROBLEM:** Exploring 2D Shapes (maths.org) **NRICH PROBLEM:** Building Towers (maths.org)

	• Identify and name circles and triangles • Compare circles and triangles • Shapes in the environment • Describe position **NRICH SUGGESTION:** Making a Picture (maths.org) **1,2,3,4,5** **Reasoning Thread:** ***What comes next?*** • Find 4 and 5 • Subitise 4 and 5 • Represent 4 and 5 • 1 more • 1 less • Composition of 4 and 5 • Composition of 1-5 • **NRICH SUGGESTION:** Dice | NRICH **Shapes with four sides** **Reasoning Thread:** ***Odd one out*** • Identify and name shapes with 4 sides • Combine shapes with 4 sides • Shapes in the environment • My day and night **NRICH SUGGESTION:** Hidden Jewels (maths.org) Calendar Muddle (maths.org)	**Length, height and time** **Reasoning Thread:** ***True or False*** • Explore length • Compare length • Explore height • Compare height • Talk about time • Order and sequence time **NRICH PROBLEM:** Shopping - Pirate Poundland (maths.org) Balances (maths.org) **Building 9 and 10** **Reasoning Thread:** ***True or False*** • Find 9 and 10 • Compare numbers to 10 • Represent 9 and 10 • Conceptual subitising to 10 • 1 more • 1 less • Composition to 10 • Bonds to 10 (2parts) • Make arrangements of 10 • Bonds to 10 (3 parts) • Double to 10 (find a double) • Double to 10 (make a double) • Explore even and odd **NRICH PROBLEM:** Hidden Jewels | NRICH	**Sharing and grouping** **Reasoning Thread:** ***True or False*** • Explore sharing • Sharing • Explore grouping • Grouping • Even and odd sharing • Play with and build doubles **NRICH PROBLEM:** Using books: The Doorbell Rang | NRICH **Visualise, build and map** **Reasoning Thread:** ***What comes next?*** • Identify units of repeating patterns • Create own pattern rules • Explore own patterns rules • Replicate and build scenes and constructions • Visualise from different positions • Describe positions • Give instructions to build • Explore mapping • Represent maps with models • Create own maps from familiar places • Create own maps and plans from story situations **NRICH PROBLEM:** Paths (maths.org) **NRICH PROBLEM:** Obstacle Course (maths.org)

		Explore 3D shapes **Reasoning Thread:** ***Odd one out*** • Recognise and name 3D shapes • Find 2D shapes within 3D shapes • Use 3D shapes for tasks • 3D shapes in the environment • Identify more complex patterns • Copy and continue patterns • Patterns in the environment **NRICH PROBLEM:** Owl's Packing List (maths.org) Pattern Making (maths.org)	**Make connections** **Reasoning Thread:** ***True or False*** • Deepen understanding • Patterns and relationships

Years 1/2 (Cherry Blossom/Sweet Chestnut/Wild Cherry) AUTUMN

	Place Value		**Addition and Subtraction** **(Use inverse/ estimations as part of the success criteria to check calculation)**		**Shape**	
Reasoning thread	**What comes next?** **True or False**		**True or False** **Spot the mistakes** **Missing numbers and symbols**		**Prove it** **Always, sometimes, never**	
	Year 1 **(Within 10)**	**Year 2**	**Year 1** **(Within 10)**	**Year 2** **To incorporate column +/- without exchanging.**	**Year 1**	**Year 2**
	• Sort objects • Count objects • Represent objects • Recognise numbers as words • Count on from any number **RTP** • 1 more • Count backwards within 10 **RTP** • 1 less • Compare groups by matching • Fewer, more, same **RTP** • Less than, Greater than, equal to **RTP** • Compare numbers **RTP** • Order objects and numbers **RTP** • The number line **RTP** **NRICH PROBLEM:** Making Sticks (maths.org)	• Numbers to 20 • Count objects to 100 by making 10s • Recognise tens and ones **RTP** • Use a place value chart **RTP** • Partition numbers to 100 **RTP** • Write numbers to 100 in words • Flexibly partition numbers to 100 **RTP** • Write numbers to 100 in expanded form. **RTP** • 10s on the number lines to 100 **RTP** • 10s and 1s on the number line to 100 **RTP** • Estimate numbers on a number line **RTP** • Compare objects • Compare numbers • Order objects and numbers • Count in 2s, 5s and 10s	• What are parts and wholes • Part-whole model • Writing number sentences • Fact families – addition facts **RTP** • Number bonds within 10 **RTP** • Systematic number bonds within 10 **RTP** • Number bonds to 10 **RTP** • Addition – add together **RTP** • Addition – Add more **RTP** • Addition problems **RTP** • Finding a part **RTP** • Subtraction – find a part **RTP** • Fact families – the eight facts **RTP** • Subtraction – take away/cross out **RTP** • Take away (How many left?) **RTP** • Subtraction on a number line **RTP** • Add or subtract 1 or 2	• Bonds to 10 **RTP** • Fact families – addition and subtraction bonds within 20. • Related facts • Bonds to 100 (10s) • Add and subtract 1s • Add by making 10 **RTP** • Add three 1d numbers • Add to the next 10 **RTP** • Add across a 10 **RTP** • Subtract across 10 **RTP** • Subtract from 10 **RTP** • Subtract a 1d number from a 2d number **RTP** • 10 more/less **RTP** • Add/subtract 10s **RTP**	• Recognise and name 3D shapes **RTP** • Sort 3D shapes **RTP** • Recognise and name 2D shapes **RTP** • Sort 2D shapes **RTP** • Pattern with 2D and 3D shapes **RTP** **NRICH PROBLEM:** Jig Shapes (maths.org)	• Recognise 2D and 3D shapes **RTP** • Count sides on 2D shapes **RTP** • Count vertices on 3D shapes **RTP** • Draw 2D shapes • Lines of symmetry • Use lines of symmetry to complete shapes • Sort 2D shapes **RTP** • Count faces on 3D shapes **RTP** • Count edges on 3D shapes **RTP** • Count vertices on 3D shapes **RTP** • Sort 3D shapes **RTP** • Make patterns with 2D and 3D shapes **NRICH PROBLEM:** Skeleton Shapes (maths.org)

		• Count in 3s **NRICH PROBLEM:** 100 Square Jigsaw (maths.org)	**NRICH PROBLEM:** The Tall Tower (maths.org)	• Add two 2d numbers (not across a 10) **RTP** • Add two 2d numbers (across a 10) **RTP** • Subtract two 2d numbers (not across a 10) **RTP** • Subtract two 2d numbers (across a 10) **RTP** • Mixed addition and subtraction **RTP** • Compare number sentences • Missing number problems **NRICH PROBLEM:** Birthday Cakes (maths.org)		
NCETM Spine Links	NCETM: Number, addition and subtraction: 1.1, 1.3, 1.4, 1.9, 1.10	NCETM: Number, addition and subtraction: 1.9 Multiplication and division: 2.1	NCETM: Number, addition and subtraction: 1.2, 1.5-1.7, 1.10, 1.11 Multiplication and division: 2.1	NCETM: Number, addition and subtraction: 1.2, 1.8, 1.7, 1.9, 1.11, 1.13, 1.14, 1.15, 1.16 Multiplication and division: 2.1		

Years 1/2 (Cherry Blossom/Sweet chestnut/Wild Cherry) SPRING

	Place value (Within 20)	Money	Addition and subtraction (Within 20)	Multiplication and division	Place Value (Within 50)	Length and height		Mass and Volume	Mass, capacity and temperature
Reasoning thread	**What comes next** **True or false**	**Other possibilities**	**Missing numbers and symbols** **True or false**	**True or False** **Spot the mistake**	**What comes next** **True or false**	**Prove it**		**True or false**	**Prove it**
	Year 1	**Year 2**	**Year 1**	**Year 2**	**Year 1**	**Year 1**	**Year 2**	**Year 1**	**Year 2**
	• Count within 20 **RTP** • Understanding 10 • Understanding 11,12,13 • Understand 14,15,16 • Understand 17,18,19 • Understand 20 • 1 more and 1 less • The number line to 20. **RTP** • Use a number line to 20 **RTP** • Estimate on a number line to 20 • Compare numbers to 20 **RTP** • Order numbers to 20. **RTP** **NRICH PROBLEM:**	• Count money - pence. • Count money – pounds (notes and coins) • Count money – pounds and pence • Choose notes and coins • Make the same amount • Compare amounts of money • Calculate with money. • Make a pound **RTP** • Find change **RTP** • Two-step problems **NRICH PROBLEM:** The Puzzling Sweet Shop (maths.org) Fruity Pairs (maths.org)	•Add by counting on within 20 **RTP** •Add ones using number bonds **RTP** •Find and make number bonds to 20. •Doubles •Near doubles •Subtract ones using number bonds **RTP** •Subtraction – counting back **RTP** •Subtraction – finding the difference. **RTP** •Related number facts •Missing number problems. **RTP** **NRICH PROBLEM:** The Tall Tower (maths.org)	•Recognise equal groups •Make equal groups •Add equal groups •Introduce the multiplication symbol •Multiplication sentences •Use arrays •Make equal groups – grouping •Make equal groups – sharing. •The two times table. •Divide by 2 •Doubling and halving •Odd and even numbers •The 10 times table •Divide by 10 •The 5 times table •Divide by 5 •The 5 and 10 times table **NRICH PROBLEM:** Odd Times	• Count from 20 to 50 **RTP** • 20, 30, 40 and 50. • Count by making groups of tens. **RTP** • Groups of tens and ones • Partition into tens and ones • The number line to 50 **RTP** • Estimate on a number line to 50 • 1 more, 1 less. **NRICH PROBLEM:** All Change (maths.org)	• Compare lengths and heights. • Measure length using objects • Measure length in centimetres **NRICH PROBLEM:** Can You Do it Too? (maths.org)	• Measure in cm • Measure in m • Compare lengths and heights • Order lengths and heights • Four operations with lengths and heights **RTP** **NRICH PROBLEM:** Little Man (maths.org)	• Heavier and lighter • Measure mass • Compare mass • Full and empty • Compare volume • Measure capacity • Compare capacity. **NRICH PROBLEM:** Bottles (2) (maths.org)	• Compare mass • Measure in g • Measure in kg • Four operation with mass • Compare volume and capacity • Measure in ml • Measure in l • Four operations with volume and capacity • Temperature **NRICH PROBLEM:** Order, Order! (maths.org)

	What's in a Name? (maths.org)			Even (maths.org)					
NCETM Spine Links	NCETM: Number, addition and subtraction: 1.1, 1.3, 1.4, 1.10		NCETM: Number, addition and subtraction: 1.2, 1.5-1.7, 1.10, 1.11 Multiplication and division: 2.1	NCETM: Multiplication and division: 2.2-2.6.	NCETM: Number, addition and subtraction: 1.9		NCETM: Number, addition and subtraction: 1.1	NCETM: Number, addition and subtraction: 1.1	

Years 1/2 (Cherry Blossom/Sweet chestnut/Wild Cherry) SUMMER

	Multiplication and division	Statistics	Fractions		Position and Direction		Place Value (Within 100)	Money	Time	
Reasoning thread	**Missing numbers** **True or false**	**True or false**	**Odd one out**		**Always, sometimes, never** **Convince me**		**What comes next** **Possible answers**	**Possible answers** **True or false**	**Spot the mistake**	
	Year 1	**Year 2**	**Year 1**	**Year 2**	**Year 1**	**Year 2**	**Year 1**	**Year 1**	**Year 1**	**Year 2**
NCETM Spine Links	• Count in 2s • Count in 10s • Count in 5s • Recognise equal groups • Make arrays • Make doubles • Make equal groups – grouping • Make equal groups – sharing **NRICH PROBLEM:** Lots of Biscuits! (maths.org)	• Make tally charts • Tables • Block diagrams • Draw pictograms (1-1) • Interpret pictograms (1-1) • Draw pictograms (2,5 and 10) • Interpret pictograms (2, 5 and 10) **NRICH PROBLEM:** Ladybird Count (maths.org) What Shape and Colour? (maths.org)	• Recognise a half of an object or a shape • Find half of an object or a shape • Recognise a half of a quantity • Recognise a quarter of an object or a shape • Find a quarter of an object of a shape • Recognise a quarter of a quantity. • Fina a quarter of a quantity. **NRICH PROBLEM:** Halving (maths.org)	• Introduction to parts and wholes. • Equal and unequal parts. • Recognise a half • Find a half • Recognise a quarter • Find a quarter • Recognise a third • Find a third. • Find the whole • Unit fractions • Non-unit fractions • Recognise the equivalence of a half and two quarters • Recognise three-quarters • Find three-quarters • Count in fractions up to a whole.	• Describe turns • Describe position – left and right • Describe position – forwards and backwards • Describe position – above and below • Ordinal numbers **NRICH PROBLEM:** Tangram Tangle (maths.org)	• Language of position • Describe movement • Describe turns • Describe movement and turns • Shape patterns with turns. **NRICH PROBLEM:** En-counters (maths.org))	• Count from 50 to 100 **RTP** • Tens to 100 • Partition into tens and ones • The number line to 100 • 1 more, 1 less • Compare numbers with the same number of tens • Compare any two numbers **NRICH PROBLEM:** 100 Square Jigsaw (maths.org)	• Unitising • Recognise coins • Recognise notes • Count in coins **NRICH PROBLEM:** Five Coins (maths.org)	• Before and after • Days of the week • Months of the year • Hours, minutes and seconds • Tell the time to the hour • Tell the time to the half hour **NRICH PROBLEM:** Snap (maths.org)	• O'clock and half past • Quarter past and quarter to • Tell the time past the hour • Tell the time to the hour • Tell the time to 5 minutes • Minutes in an hour • Hours in a day. **NRICH PROBLEM:** Matching Time (maths.org)

				NRICH PROBLEM: No Nrich suggested, to make choices base don children's needs.						
				NCETM: Fractions 3.0						NCETM:Number, addition and subtraction: 1.12

Years 3/4 (Silver Birch and Sycamore) AUTUMN

	Place Value		Addition and Subtraction (Use inverse/ estimations as part of the success criteria to check calculation)		Area	Multiplication and Division (Use inverse/ estimations as part of the success criteria to check calculation)	
Reasoning thread	**Missing numbers** **Possible answers** **What comes next?**		**Missing numbers and symbols** **Other possibilities**		**Convince me**	**Missing numbers and symbols** **Other possibilities**	
	Year 3	**Year 4**	**Year 3**	**Year 4**	**Year 4**	**Year 3**	**Year 4** **ALL RTP**
	• Representing numbers to 100 **RTP** • Partitioning numbers to 100 • Number lines to 100 • Representing numbers to 1000 **RTP** • Partitioning numbers to 1000 **RTP** • Flexible partitioning to 1000 **RTP** • Hundreds, tens and ones – composition **RTP** • Find 1, 10 or 100 more/less **RTP** • Estimate on a number line to 1000 **RTP** • Compare numbers to 1000 **RTP** • Order numbers to 1000 **RTP** • Count in 50s **RTP** **NRICH PROBLEM: Coded Hundred Square (maths.org)**	• Represent numbers to 1000 **RTP** • Partition numbers to 1000 • Number lines to 1000 • Thousands • Represent numbers to 10,000 **RTP** • Partition numbers to 10,000 **RTP** • Flexible partitioning to 10,000 **RTP** • Find 1, 10, 100 or 1000 more/less **RTP** • Number lines to 10,000 **RTP** • Estimate on a number line to 10,000 **RTP** • Compare numbers to 10,000 • Order numbers to 10,000 • Roman Numerals • Rounding to the nearest 10 **RTP**	• Apply number bonds within 10 • Add/subtract 1s • Add/subtract 10s • Add/subtract 100s • Spot the pattern • Add 1s across a 10s boundary **RTP** • Add 10s across a 100 boundary **RTP** • Subtract 1s across a 10 boundary **RTP** • Subtract 10s across a 100 boundary **RTP** • Add two numbers (no exchange) **RTP** • Subtract 2 numbers (no exchange) **RTP** • Add two numbers (across a 10) **RTP** • Add two numbers (across a 100) **RTP** • Subtract two numbers (across a 10) **RTP**	• Add and subtract 1s, 10s, 100s and 1000s. • Add up to 4d numbers – no exchange. • Add 2d numbers – one exchange. • Add two 4d numbers – more than one exchange • Subtract two 4d numbers – no exchange • Subtract two 4d numbers – one exchange • Subtract two 4d numbers – more than one exchange • Efficient subtraction • Estimate answers • Checking strategies	• What is area? • Counting squares • Making shapes of given areas • Comparing areas **NRICH PROBLEM:** Torn Shapes (maths.org)	• Multiplication as equal groups • Arrays • Multiples of 2 • Multiples of 5 and 10 **RTP** • Sharing and grouping • Multiply by 3 • Divide by 3 • 3 times table facts • Multiply by 4 • Divide by 4 • 4 times table facts • Multiply by 8 • Divide by 8 • 8 times table facts • The 2, 4 and 8 times tables – patterns. **NRICH PROBLEM:** A Square of Numbers (maths.org)	• Multiples of 3 • Multiply and divide by 6 • 6 times table and division facts • Multiply and divide by 9 • 9 times table and division facts • The 3, 6 and 9 times tables • Multiply and divide by 7 • 7 times table and division facts • 11 times-table and division facts • 12 times-table and division facts • Multiply by 1 and 0 • Divide a number by 1 and itself • Multiply three numbers. **NRICH PROBLEM:** Shape Times Shape (maths.org)

		• Rounding to the nearest 100 **RTP** • Rounding to the nearest 1000 **RTP** • Rounding to the nearest 10,000 **RTP** • Rounding to the nearest 10, 100 and 1000. • **NRICH PROBLEM: What Distance? (maths.org)**	• Subtract two numbers (across a 100) **RTP** • Add 2 and 3 digit numbers **RTP** • Subtract a 2d number from a 3d number. **RTP** • Complements to 100 **RTP** • Estimate answers • Inverse operations **RTP** • Make decisions **RTP** • **NRICH PROBLEM:** Super Shapes (maths.org)	**NRICH PROBLEM:** Fifteen Cards (maths.org)			
NCETM Spine Links	NCETM: Number, addition and subtraction: 1.17, 1.18	NCETM: Number, addition and subtraction: 1.17, 1.22, 1.27	NCETM: Number, addition and subtraction: 1.18-1.21	NCETM: Number, addition and subtraction: 1.20, 1.21, 1.22	NCETM: Multiplication and division: 2.16	NCETM: Multiplication and division: 2.6-2.8	NCETM: Multiplication and division: 2.6, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15

Years 3/4 (Silver Birch and Sycamore) SPRING

	Multiplication and Division		Length and Perimeter		Fractions		Mass and Capacity	Decimals
Reasoning thread	**Missing numbers and symbols** **Prove it** **Odd one out**		**Convince me** **Spot the mistake**		**Prove it** **Odd one out** **True or False**		**Missing numbers and symbols** **Prove it** **True or False**	
	Year 3	**Year 4**	**Year 3**	**Year 4**	**Year 3**	**Year 4**	**Year 3**	**Year 4**
	• Multiples of 10 • Related calculations • Reasoning about multiplication • Multiply a 2d number by a 1d number – no exchange • Multiply a 2d number by a 1d number – with exchange • Link multiplication and division • Divide a 2d number by a 1d number – no exchange • Divide a 2d number by a 1d number – flexible partitioning • Divide a 2d number by a 1d number – with remainders • Scaling • How many ways?	• Factor pairs • Use factor pairs • Multiply by 10 **RTP** • Multiply by 100 **RTP** • Divide by 10 **RTP** • Divide by 100 **RTP** • Related facts – multiplication and division • Informal written methods for multiplication **RTP** • Multiply a 2d number by a 1d number **RTP** • Multiply a 3d number by a 1d number **RTP** • Divide a 2d number by a 1d number • Divide a 3d number by a 1d number • Correspondence problems • Efficient multiplication	• Measure in m and cm **RTP** • Measure in mm **RTP** • Measure in cm and mm **RTP** • M, cm and mm • Equivalent lengths (m and cm) **RTP** • Equivalent (cm and mm) **RTP** • Compare lengths • Add lengths • Subtract lengths • What is a perimeter? • Measure perimeter • Calculate perimeter **NRICH PROBLEM:** Through the Window (maths.org)	• Measure in km and m • Equivalent lengths (km and m) • Perimeter on a grid • Perimeter on a rectangle • Perimeter of rectilinear shapes • Find missing lengths in rectilinear shapes • Calculate perimeter of rectilinear shapes • Perimeter of regular polygons **RTP** • Perimeter of polygons **RTP** **NRICH PROBLEM** Area and Perimeter (maths.org)	• Understand the denominators of unit fractions **RTP** • Compare and order unit fractions • Understand the numerators of non-unit fractions **RTP** • Understand the whole **RTP** • Fractions and scales • Fractions on a number line • Count in fractions on a number line. • Equivalent fractions on a number line • Equivalent fractions as bar models. **NRICH PROBLEM** Matching Fractions (maths.org)	• Understand the whole • Count beyond 1 • Partition a mixed number • Number lies with nixed fractions **RTP** • Compare and order mixed fractions **RTP** • Understand improper fractions • Convert mixed numbers to improper fractions **RTP** • Convert improper fractions to mixed number fractions. **RTP** • Equivalent fractions on a number line • Equivalent fraction families • Add two or more fractions	• Use scales • Measure mass in g • Measure mass in kg and g • Equivalent masses (kg and g) • Compare mass7Add and subtract mass • Measure capacity and volume in ml • Measure capacity and volume in l and ml. • Equivalent capacities and volumes (l and ml) • Compare capacity and volume • Add and subtract capacity and volume **NRICH PROBLEM:** Oh! Harry! (maths.org)	• Tenths as fractions • Tenths as decimals • Tenths on a place value chart • Tenths on a number line • Divide a 1d number by 10 • Divide a 2d number by 10 • Hundredths as fractions • Hundredths as decimals • Hundredths on a place value chart • Divide a 1 or a 2d number by 100 **NRICH PROBLEM:** Round the Dice Decimals 1 (maths.org)

	NRICH PROBLEM: The Pied Piper of Hamblin	**NRICH PROBLEM:** Zios and Zepts (maths.org)				• Add fractions and mixed numbers **RTP** • Subtract two fractions • Subtract from whole amounts **RTP** • Subtract from mixed numbers **RTP** **NRICH PROBLEM** Fractions in a Box (maths.org)		
NCETM Spine Links	NCETM: Multiplication and division: 2.6, 2.8, 2.13, 2.14, 2.15, 2.17, 2.19	NCETM: Multiplication and division: 2.6, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15	NCETM: Multiplication and division: 2.16	NCETM: Multiplication and division: 2.16	NCETM: Fractions: 3.1, 3.2, 3.6, 3.3, 3.4, 3.7	NCETM: Fractions: 3.0, 3.4, 3.5, 3.7		NCETM: Number, addition and subtraction: 1.23-1.24

Years 3/4 (Silver Birch and Sycamore) SUMMER

	Fractions	Decimals	Money		Time		Shape		Statistics		Position and Direction
Reasoning thread	**Prove it** **Odd one out**	**Other possibilities** **Missing numbers and symbols**	**Missing numbers and symbols** **Spot the mistake**		**True or False**		**Always, sometimes and never** **True or False**		**Convince me**		**Spot the mistake**
	Year 3	**Year 4**	**Year 3**	**Year 4**	**Year 3**	**Year 4**	**Year 3**	**Year 4**	**Year 3**	**Year 4**	**Year 4**
	• Add fractions **RTP** • Subtract fractions **RTP** • Partition the whole **RTP** • Unit fractions of a set of objects • Non-unit fractions of a set of objects • Reasoning with fractions of an amount. NRICH PROBLEM: Matching Fractions (maths.org)	• Make a whole with tenths • Make a whole with hundredths • Partition decimals • Flexibly partition decimals • Compare decimals • Order decimals • Round to the nearest whole numbers • Halves and quarters as deicmals. NRICH PROBLEM: Round the Dice	• Pounds and pence • Convert pounds and pence • Add money **RTP** • Subtract money **RTP** • Find change **RTP** NRICH PROBLEM: How Much Did it Cost? (maths.org)	• Write money using decimals • Convert between pounds and pence • Compare amounts of money • Estimate with money • Calculate with money • Solve problems with money NRICH PROBLEM: How Much Did it Cost? (maths.org)	• Roman numerals to 12 • Tell the time to 5m • Tell the tie to the minute • Read time on a digital clock • Use am and pm • Years, months and days • Days and hours • Hours and minutes – use start and end times • Hours and minutes – use durations	• Years, months, weeks and days • Hours, minutes and seconds • Convert between analogue and digital times • Convert to the 24 hours clock • Convert from the 24 hours clock. NRICH PROBLEM: The Time Is ... (maths.org)	• Turns and angles • Right angles **RTP** • Compare angles • Measure and draw accurately • Horizontal and vertical • Parallel and perpendicular **RTP** • Recognise and describe 2D shapes • Draw polygons **RTP** • Recognise and describe 3D shapes • Make 3D shapes.	• Understand angles as turns • Identify angles • Compare and order angles • Triangles **RTP** • Quadrilaterals **RTP** • Polygons **RTP** • Lines of symmetry **RTP** • Complete a symmetric figure **RTP** NRICH PROBLEM: Nine-pin Triangles (maths.org)	• Interpret pictograms • Draw pictograms • Interpret bar charts • Draw bar charts • Collect and represent data • Two-way tables NRICH PROBLEM: Class 5's Names (maths.org)	• Interpret charts • Comparison, sum and difference • Interpret line graphs • Draw line graphs. NRICH PROBLEM: How Big Are Classes 5, 6 and 7? (maths.org)	• Describe position using coordinates • Plot coordinates • Draw a 2D shape on a grid **RTP** • Translate on a grid **RTP** • Describe translation on a grid NRICH PROBLEM: Coordinate Challenge (maths.org)

		Decimals 1 (maths.org)			• Minutes and seconds • Units of time • Solve problems with time. NRICH PROBLEM: Wonky Watches (maths.org)		NRICH PROBLEM: National Flags (maths.org)				
NCETM Spine Links	NCETM: Fractions: 3.1, 3.2, 3.6, 3.3, 3.4, 3.7	NCETM: Number, addition and subtraction: 1.23-1.24		NCETM: Number, addition and subtraction: 1.22, 1.25							

Years 5/6 (Oak and Willow) AUTUMN

	Place Value		Addition and Subtraction	Multiplication and division	Four operations	Fractions A		Fractions B	Converting Units
Reasoning thread	Spot the mistake Missing numbers and symbols Possible answers		Other possibilities Convince me Spot the mistake	Other possibilities Making links Spot the mistake	Missing numbers and symbols Other possibilities	Prove it True or False Making links		Odd one out	Prove it/convince me Always, sometimes and never?
	Year 5	**Year 6**	**Year 5**	**Year 5**	**Year 6**	**Year 5**	**Year 6**	**Year 6**	**Year 6**
	• Roman Numerals to 1000. • Numbers to 10,000 • Numbers to 100,000 • Numbers to 1,000,000 • Read and write numbers to 1,000,000 • Powers of 10. • 10/100/ 1,000/10,000/ 100,000 more/less. • Partition numbers to 1,000,000. • Number line to 1,000,000 • Compare and order numbers to 100,000 • Compare and order numbers to 1,000,000	• Numbers to 1,000,000. **RTP** • Numbers to 10,000,000 **RTP** • Read and write numbers to 10,000,000 **RTP** • Powers of 10 **RTP** • Number line to 10,000,000 **RTP** • Compare and order any integers **RTP** • Round any integer **RTP** • Negative numbers **NRICH PROBLEM:** First Connect Three (maths.org)	• Mental strategies • Add whole numbers with more than 4dgts. • Subtract whole numbers with more than 4dgts. • Round to check answers • Inverse operations (+/-) • Multi-step addition and subtraction problems. • Compare calculations • Find missing numbers. **NRICH PROBLEM:**	• Multiples **RTP** • Common multiples **RTP** • Factors **RTP** • Common factors **RTP** • Prime numbers • Square numbers **RTP** • Cube numbers • Multiply by 10,100 and 1,000. **RTP** • Divide by 10, 100 and 1,000 **RTP** • Multiples of 10, 100 and 1,000. **RTP** **NRICH PROBLEM:** Trebling (maths.org)	• Add and subtract integers • Common factors • Common multiples • Rules of divisibility. • Primes to 100 • Square and cube numbers • Multiply up to a 4d number by a 2d number. • Solve problems with multiplication. **RTP** • Short division • Division using factors **RTP** • Introduction to long division • Long division with remainders	• Find fractions equivalent to a unit-fraction. **RTP** • Find fractions equivalent to a non-unit fraction. **RTP** • Recognise equivalent fractions **RTP** • Convert improper to mixed number fractions. • Convert mixed number fractions to improper fractions. • Compare fractions less than 1 • Order fractions less than 1 • Compare and order fractions greater than 1. • Add/subtract fractions with the same denominator • Add fractions within 1.	• Equivalent fractions and simplifying **RTP** • Equivalent fractions on a number line **RTP** • Compare and order (denominator) **RTP** • Compare and order (numerator) **RTP** • Add and subtract simple fractions • Add and subtract any two fractions • Add mixed numbers • Subtract mixed numbers • Multistep problems	• Multiply fractions by integers • Multiply fractions by fractions • Divide a fractions by an integer • Divide any fractions by an integer • Mixed questions with fractions • Fraction of an amount. • Fraction of an amount – find the whole **NRICH PROBLEM:** More Fraction Bars (maths.org)	• Metric measures • Convert metric measures **RTP** • Calculate with metric measures • Miles and kilometres • Imperial measures. TESTBASE

	• Round to 10, 100 and 1000. • Round within 100,000 • Round within 1,000,000. **NRICH PROBLEM:** Space Distances (maths.org)		Maze 100 (maths.org)		• Solve problems with division **RTP** • Solve multi-step problems **RTP** • Order of operations • Mental calculations and estimation. • Reason from known facts. **RTP** **NRICH PROBLEM:** Always, Sometimes or Never? Number (maths.org)	• Add fractions with a total greater than 1 • Add to a mixed number • Add two mixed numbers • Subtract fractions • Subtract from a mixed number • Subtract from a mixed number – breaking the whole. • Subtract two mixed numbers. **NRICH PROBLEM:** Linked Chains (maths.org)	**NRICH PROBLEM:** Fraction Lengths (maths.org)		
NCETM Spine Links	NCETM: Numbers, addition and subtraction: 1.26, 1.27	NCETM: Numbers, addition and subtraction: 1.26, 1.30	NCETM: Numbers, addition and subtraction: 1.20, 1.21, 1.22, 1.28, 1.29	NCETM: Multiplication and division: 2.9, 2.13, 2.18, 2.19, 2.20, 2.21	NCETM: Numbers, addition and subtraction: 1.20, 1.21, 1.30 NCETM: Multiplication and division: 2.20, 2.21, 2.22, 2.23, 2.24, 2.25, 2.28	NCETM: Fractions: 3.5, 3.6, 3.7, 3.8	NCETM: Fractions: 3.5, 3.6, 3.7, 3.8, 3.9	NCETM: Fractions: 3.5, 3.6, 3.7, 3.8	

Years 5/6 (Oak and Willow) SPRING

	Multiplication and Division		Ratio		Fractions B		Algebra		Decimals (Year 5 to include percentages)		Fractions, decimals and percentages	Perimeter and area (Year 6 to include Volume)		Statistics	
Reasoning thread	Making links Missing numbers and symbols				Spot the mistake True or False				Missing numbers and symbols Spot the mistake Prove it		True or False Odd one out	Prove it/convince me Always, sometimes and never?		Convince me True or false	
	Year 5		**Year 6**		**Year 5**		**Year 6**		**Year 5**	**Year 6**	**Year 6**	**Year 5**	**Year 6**	**Year 5**	**Year 6**
	• Multiply up to a 4d number by a 1d number. **RTP** • Multiply a 2d number by a 2d number (area model) **RTP** • Multiply a 2d number by a 2d number **RTP** • Multiply a 3d number by a 2d number **RTP** • Multiply a 4d number by a 2d number **RTP** • Solve problems with multiplication • Short division **RTP**		• Add or multiply? **RTP** • Use ratio language • Introduction to the ratio symbol • Ratio and fractions • Scale drawing **RTP** • Use scale factors **RTP** • Similar scales **RTP** • Ratio problems **RTP** • Proportion problems **RTP** • Recipes **RTP**		• Multiply a unit fraction by an integer • Multiply a non-unit fraction by an integer • Calculate a fraction by a quantity **RTP** • Fraction of an amount **RTP** • Find the whole • Use fractions as operators. **NRICH PROBLEM:** Linked Chains		• 1-step function machine • 2-step function machine • Form expression • Substitution • Formula • Form equation • Solve 1-step equation • Solve 2-step equation • Find pairs of values **RTP**		• Decimals up to 2dp **RTP** • Equivalent decimals and fractions (tenths) **RTP** • Equivalent fractions and decimals (hundredths and tenths) **RTP** • Equivalent fractions and decimals **RTP** • Thousandths as decimals • Thousandths on a place value chart • Order and compare	• Place value within 1. • Place value – integers and decimals • Round decimals • Add and subtract decimals • Multiply by 10, 100 and 1000 **RTP** • Divide by 10, 100 and 1000 **RTP** • Multiply decimals by integers • Divide decimals by integers • Multiply and divide decimals in context.	• Decimals and fraction equivalents • Fractions as division • Understand percentages • Fractions to percentages • Equivalent fractions, decimals and percentages • Order fractions, decimals and percentages • Percentage of an amount – one step • Percentages of an amount – multi step	• Perimeter of rectangles • Perimeter of rectilinear shapes • Perimeter of polygons • Area of rectangles **RTP** • Area of compound shapes **RTP** • Estimate area. **NRICH PROBLEM:** Fitted (maths.org)	• Shapes – same area **RTP** • Area and perimeter **RTP** • Area of a triangle – counting squares **RTP** • Area of a right-angled triangle **RTP** • Area of any triangle **RTP** • Area of a parallelogram **RTP** • Volume - counting cubes • Volume of a cuboid	• Draw line graphs • Read and interpret line graphs • Read ad interpret tables • Two-way tables • Read and interpret timetables. **NRICH PROBLEM:** Plants (maths.org)	• Line graphs • Dual bar charts • Read and interpret pie charts • Pie charts with percentages • Draw pie charts • The mean **NRICH PROBLEM:** Match the Matches (maths.org)

	• Divide a 4d number by a 1d number **RTP** • Divide with remainders **RTP** • Efficient subtraction • Solve problems with multiplication and division. **NRICH PROBLEM:** Which Is Quicker? (maths.org)	**NRICH PROBLEM:** Rule of Three (maths.org)	(maths.org)	• Solve problem with two unknowns. **RTP** **NRICH PROBLEM:** Different Deductions (maths.org)	decimals (same number of dp) **RTP** • Order and compare any decimals with up to 3dp. **RTP** • Round to the nearest whole number **RTP** • Round to 1dp **RTP** • Understand percentages • Percentages as fractions • Percentages as decimals • Equivalent fractions, decimals and percentages. **RTP** **NRICH PROBLEM:** Forgot the Numbers (maths.org)	**NRICH PROBLEM:** Spiralling Decimals (maths.org)	• Percentages – missing values **NRICH PROBLEM:** Doughnut Percents (maths.org)		**NRICH PROBLEM:** Making Cuboids (maths.org)		
NCETM Spine Links	NCETM: Multiplication and division: 2.9, 2.13, 2.18, 2.19, 2.20, 2.21	NCETM: Multiplication and division: 2.27	NCETM: Fractions: 3.5, 3.6, 3.7, 3.8	NCETM: Numbers, addition and subtraction: 1.28, 1.31	NCETM: Numbers, addition and subtraction: 1.23, 1.24 Multiplication and division: 2.19, 2.29 Fractions: 3.10	NCETM: Numbers, addition and subtraction: 1.24 Multiplication and division: 2.19, 2.28 Fractions: 3.10	NCETM: Numbers, addition and subtraction: 1.24 Multiplication and division: 2.19, 2.28 Fractions: 3.10	NCETM: Multiplication and division: 2.16, 2.20	NCETM: Multiplication and division: 2.16, 2.20, 2.30	NCETM: Numbers, addition and subtraction: 1.28, 1.29	NCETM: Numbers, addition and subtraction: 1.28 Multiplication and division: 2.26 Fractions: 3.10

Years 5/6 (Oak and Willow) SUMMER

	Shape		Position and Direction		Decimals	Negative Numbers	Converting Units	Volume
Reasoning thread	Prove it/convince me Always, sometimes and never?		Prove it/convince me		Missing numbers and symbols Spot the mistake True or False?	Odd one out	Prove it/convince me	Always, sometimes and never?
	Year 5	**Year 6**	**Year 5**	**Year 6**	**Year 5**	**Year 5**	**Year 5**	**Year 5**
	• Understand and use degrees • Classify angles **RTP** • Estimate angles **RTP** • Measure angles up to 180° **RTP** • Draw lines and angles accurately **RTP** • Calculate angles around a point • Calculate angles on a straight line • Lengths and angles in shapes. • Regular and irregular polygons • 3D shapes **NRICH PROBLEM:** Estimating Angles (maths.org)	• Measure and classify angles • Calculate angles • Vertically opposite angles • Angles in a triangle **RTP** • Angles in a triangle – special cases **RTP** • Angles in a triangle – missing angles **RTP** • Angles in a quadrilateral **RTP** • Angles in polygons **RTP** • Circles • Draw shapes accurately **RTP** • Nets of 3D shapes **NRICH PROBLEM:** Ten Hidden Squares (maths.org)	• Read and plot coordinates • Problem solving with coordinates • Translation • Translation with coordinates • Lines of symmetry • Reflection in horizontal and vertical lines. **NRICH PROBLEM:** Transformations on a Pegboard (maths.org)	• The first quadrant • Read and plot points in the first quadrants • Solve problems with coordinates • Translations • Reflections **NRICH PROBLEM:** A Cartesian Puzzle (maths.org)	• Use known facts to add and subtract decimals within 1. • Complements to 1 • Add and subtract decimals across 1 • Add decimals with the same number of decimal places • Subtract decimals with the same number of decimal places. • Add decimals with different number of decimals. • Subtract decimals with different number of decimals • Efficient strategies for adding and subtracting decimals. • Decimal sequences • Multiply by 10, 100 and 1000 **RTP**	• Understand negative numbers • Count through zero in 1s • Count through zero in multiples • Compare and order negative numbers • Find the difference • **NRICH PROBLEM:** Sea Level (maths.org)	• Kilograms and kilometres • Millimetres and millilitres • Convert units of length **RTP** • Convert between metric and imperial units **RTP** • Convert units of time **RTP** • Calculate with timetables. **NRICH PROBLEM:** Weighing Fruit (maths.org)	• Cubic centimetres • Compare volume • Estimate volume • Estimate capacity. **NRICH PROBLEM:** Oh! Harry! (maths.org)

	Making Rectangles (maths.org)				• Divide by 10, 100 and 1000 **RTP** • Multiply and divide decimals – missing values. **RTP** • **NRICH PROBLEM:** Round the Dice Decimals 2 (maths.org)			
NCETM Spine Links	NCETM: Numbers, addition and subtraction: 1.28	NCETM: Numbers, addition and subtraction: 1.28	NCETM: Numbers, addition and subtraction: 1.27	NCETM: Numbers, addition and subtraction: 1.27	NCETM: Numbers, addition and subtraction: 1.23, 1.24 Multiplication and division: 2.19, 2.29			NCETM: Multiplication and division: 2.16, 2.20