

Year 4

<u>Children know how to:</u>	<u>Opportunities and ideas for</u> <u>journaling.</u> <u>“How do mathematicians..”</u>	<u>Problem Solving and</u> <u>reasoning opportunities</u>	<u>NCETM Spine and</u> <u>Assessment Materials</u>
AUTUMN			
<u>Number: Place Value (4 WEEKS)</u>			<u>Year 4 – Spine 1</u>
Roman numerals to 100	<u>White Rose Activity</u>	NRICH	1.22: TP 1.1-1.8, 2.1-2.9
Round to the nearest 10	Represent numbers to 10,000	<u>What distance?</u>	1.22: TP 3.1- 3.8
Round to the nearest 100		<u>Nice or Nasty</u>	
Count in 1000s		<u>Dicey Operations</u>	1.22: TP 4.1- 4.13
1000s, 100s, 10s, and 1a	Introducing Negative Numbers	<u>The Deca Tree</u>	
Partitioning		<u>Four-digit Targets</u>	<u>Yr4 NCETM assessment materials</u>
Number line to 10000	How do mathematicians round numbers?	<u>Ordering journeys</u>	Page 9-11
1000 more or less	How do mathematicians represent numbers differently?	<u>Representing numbers</u>	
Compare numbers		<u>Reasoned rounding</u>	
Order numbers		<u>I See Reasoning</u>	
Round to the nearest 1000		Page 7-34	
Count in 25s			
Negative numbers			
<u>Number: Addition and Subtraction (3 WEEKS)</u>			<u>Year 4 – Spine 1</u>
Add and subtract 1s, 10s, 100s, and 1000s	How do mathematicians add?	NRICH	1.22: TP 5.1- 5.6
Add two 4-digit numbers- no exchange		<u>Fifteen Cards</u>	<u>Yr4 NCETM assessment materials</u>
Add two 4-digit numbers- one exchange	How do mathematicians subtract?	<u>Money Bags</u>	Page 12-14
Add two 4-digit numbers- more than one exchange		<u>Amy's Dominoes</u>	
Subtract two 4-digit numbers – no exchange		<u>Sealed Solution</u>	
Subtract two 4-digit numbers – one exchange	How do mathematicians estimate answers?	<u>Roll These Dice</u>	
Subtract two 4-digit numbers – more than one exchange		<u>I See Reasoning</u>	
Efficient subtraction	How do mathematicians check answers?	Page 35-59	
Estimate answers			
Checking strategies			
<u>Measurement: Time (1 WEEK)</u>			<u>Year 4 – Spine 1</u>
Hours, minutes and seconds	How do mathematicians measure time?		1.24 TP: 5.9
Years, months, weeks and days			<u>Yr4 NCETM assessment materials</u>
Analogue to digital – 12 hour	How do mathematicians convert time?		Page 22-24
Analogue to digital – 24 hour			

Number: Multiplication and Division (1) (3 WEEKS)			Year 4 – Spine 2	
Multiply by 10	How do mathematicians multiply/divide by 10/100?	NRICH Multiplication Square Jigsaw Shape Times Shape Let Us Divide! Carrying Cards Light the Lights Again Multiples Grid Zios and Zepts Times Tables Shifts Table Patterns Go Wild! I See Reasoning Page 60-92	2.10: TP 1.1- 1.8, 2.1-2.10, 3.1-3.3	
Multiply by 100			2.11: TP 1.1- 1.9	
Divide by 10	2.11: TP 2.1-2.8, 3.1- 3.2			
Divide by 100	2.11: TP 4.1-4.3			
Multiply by 1 and 0	2.12: TP 1.1-1.8, 2.1-2.6, 3.1-3.5			
Divide by 1 and itself				
Multiply and divide by 6				
6 times table and division facts				
Multiply and divide by 9				
9 times table and division facts				
Multiply and divide by 7				
7 times table and division facts				
			Yr4 NCETM assessment materials Page 15-17	
SPRING				
Number: Multiplication and Division (2) (3 WEEKS)			Year 4 – Spine 2	
11 and 12 times-table	How do mathematicians find all factor pairs?	See above	2.13: TP 1.1-1.9, 6.1-6.7	
Multiply 3 numbers			2.14: TP 1.1- 1.6, 2.1-2.15	
Factor pairs	2.13: TP 3.1-3.8, 5.1-5.7, 7.1-7.8			
Efficient multiplication	2.14: TP 3.1- 3.4, 4.1- 4.7			
Written methods	2.15: TP 1.1- 1.7, 2.1-2.10			
Multiply 2-digits by 1-digit	2.15: TP 3.1- 3.4, 4.1-4.11			
Multiply 3-digits by 1-digit				
Divide 2-digits by 1-digit (1)				
Divide 2-digits by 1-digit (2)				
Divide 3-digits by 1-digit				
Correspondence problems				
			Yr4 NCETM assessment materials Page 15-17	
Measurement: Length and Perimeter (1 WEEK)				Year 4 – Spine 2
Kilometres		I See Reasoning P94-96,106	2.17: TP 3.1- 3.3	
Perimeter on a grid			2.17: TP 3.1-3.3	
Perimeter of a rectangle			2.17: TP 1.1- 1.7, 2.1-2.6	
Perimeter of rectilinear shapes			2.16: TP 1.1- 1.4, 2.1-2.4, 3.1-3.9	
			Yr4 NCETM assessment materials Page 22-24	

Measurement: Area (1 WEEK)			Year 4 – Spine 2
What is area?		I See Reasoning P107-110 NRICH Torn Shapes Twice as Big?	2.16: TP 4.1-4.7, 5.1-5.5, 6.1-6.9
Counting squares			
Making shapes			
Comparing area			
Number: Fractions (4 WEEKS)			Year 4 – Spine 1 Year 4 – Spine 3
What is a fraction?	How do mathematicians find equivalent fractions?	I See Reasoning P78-88 NRICH Fractional Wall Fractional Triangles Bryony's Triangle Andy's Marbles Fractions in a Box Chocolate	1.24: TP 1.1-1.4, 3.1- 3.8, 6.1-6.7, 7.1-7.3
Equivalent fractions (1)			3.5: TP 1.1-1.5, 4.1- 4.8, 5.1-5.17
Equivalent fractions (2)			3.5: TP 2.1-2.11, 3.1-3.7
Fractions greater than 1			3.5: TP 6.1-6.12
Count in fractions			3.6: TP 1.1-1.18, 2.1-2.6
Add 2 or more fractions			3.6: TP 3.1-3.12, 4.1-4.8, 5.1-5.12
Subtract 2 fractions			Yr4 NCETM assessment materials
Subtract from whole amounts			Page 18-21
Calculate fractions of a quantity			
Problem solving- calculate quantities			
Measurement: Money (2 WEEKS)			Year 4 – Spine 1
Pounds and pence	Big focus on addition and subtraction White Rose Activity Working with money	I See Reasoning P97-100	1.25 TP 1.1- 1.8
Ordering money			Yr4 NCETM assessment materials Page 22-24
Estimating money			
Four operations			
SUMMER			
Number: Multiplication and Division (1 WEEK)			
Times table and written method	Consolidation of earlier times tables and training for MTC	See above	
Number: Decimals (3 WEEKS)			
Recognise tenths and hundredths	White Rose Activity Tenths and hundredths	I See Reasoning P89-93	1.23: TP 1.1-1.3, 2.1-2.4, 3.1-3.13, 4.1-4.5, 5.1-5.7, 6.1-6.6
Tenths as decimals			
Tenths on a place value grid			

Tenths on a number line	How do mathematicians find parts of a number?	NRICH Round the Dice Decimals 1	1.24: TP 2.1-2.5, 4.1-4.4 2.13: TP 2.1- 2.8, 6.1-6.7 2.13: TP 4.1-4.8, 5.1-5.7, 7.1-7.8 Yr4 NCETM assessment materials Page 18-21
Divide 1-digit by 10			
Divide 2-digits by 10			
Hundredths			
Hundredths as decimals			
Hundredths on a place value grid			
Divide 1 or 2-digits by 100			
Number: Decimals (2 WEEKS)			
Make a whole	See above	See above	See above
Write decimals			
Compare decimals			
Order decimals			
Round decimals			
Halves and quarters			
Number: Addition and Subtraction (1 WEEKS)			
Consolidation of earlier methods	Revise and review written methods		
Geometry: Properties of shapes (3 WEEKS)			
Identify angles	White Rose Activities Triangles Quadrilaterals Symmetry How do mathematicians compare angles?	I See Reasoning P114,115,118 NRICH Sorting Logic Blocks What Shape? Shapes on the Playground Nine-pin Triangles Cut it Out Let Us Reflect Stringy Quads Counters in the Middle School Fair Necklaces Symmetry Challenge	Yr4 NCETM assessment materials Page 25-26
Compare and order angles			
Triangles			
Quadrilaterals			
Lines of symmetry			
Complete a symmetric figure			
Geometry: Position and Direction (1 WEEK)			
Describe position	How do mathematicians describe movement on a grid?	I See Reasoning P119-120	
Draw on a grid			
Move on a grid			

Describe a movement on a grid		NRICH Coordinate Challenge Eight Hidden Squares A Cartesian Puzzle	
-------------------------------	--	---	--