



Year 1

Mathematics Curriculum

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RATIONALE

This maths curriculum has been designed to support a mastery approach to teaching and learning and to effectively meet the aims and objectives of the new National Curriculum. It **incorporates** more time for children to apply their skills, to demonstrate a deeper understanding of mathematics and to see mathematics in everything they do, both across the rest of the curriculum in school and in the wider world.

The core principles of this curriculum will help to pupils and teachers to develop even greater confidence in mathematics and will enable our children to become mathematicians.

A mathematician...

- Makes connections
- Shows fluency (choosing and using efficient methods, as well as known facts)
- Is able to reason about what they are doing
- Creates
- Checks (in different ways)
- Is resilient
- Explains
- Evaluates
- Models
- Invents
- Applies in a range of contexts
- Is curious
- Has confidence
- Uses mistakes to improve
- Is resourceful
- Is efficient

Lessons are crafted with care and are perfected over time with input from other teachers, drawing on evidence from careful observations of all pupils in each class.

Lesson designs are set out in detail and use well-tested methods to teach each mathematical topic. They include a variety of representations, which are essential to introduce and explore concepts effectively and set out related teacher explanations and questions to pupils.

All lessons will contain: a range of representations; variation; stem sentences; intelligent practice; coherence; fluency; differentiation; careful choices and the opportunity to dive deeper for all (Dong Nao Jin).



YEARLY PLAN

	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11
Autumn	Number: Place Value (within 10)				Number: Addition and Subtraction (within 10)			Geometry: Shape	Number: Place Value (within 20)		
Spring	Number: Addition and Subtraction (within 20)				Number: Place Value (within 50) [multiples of 2, 5 and 10 to be included]			Measurement: Length and Height		Measurement: Weight and Volume	
Summer	Number: Multiplication and Division (Reinforce multiples of 2, 5 and 10)			Number: Fractions		Geometry: Position and Direction	Number: Place Value (within 100)		Measurement : Money	Measurement: Time	

HEURISTICS TO FOCUS ON DURING THE YEAR:

Draw Something

Act it out



LINKS TO MASTERY MATERIALS

[NCETM Teaching for Mastery](#)

[NCETM Mastery PD Materials](#)

[White Rose Materials For Units](#)

TERMLY PLANS

KEY FOR NRICH TASKS

Tasks badged with a * are suitable for the whole class	Tasks badged with a ** are suitable for the majority of the class	Tasks badged with a *** are for those who like a serious challenge
G = game	All NRICH tasks are categorised as problems.	I = investigation



AUTUMN

Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11			
<p>Number: Place Value</p> <p>Count to 10, forwards and backwards, beginning with 0 or 1, or from any given number.</p> <p>Count, read and write numbers to 10 in numerals and words.</p> <p>NRICH: Writing Digits *</p> <p>NRICH: Count the Digits * I</p> <p>NRICH: What's in a Name? ** I</p> <p>Given a number, identify one more or one less.</p> <p>Identify and represent numbers using objects and pictorial representations including number lines and using the language of equal to, more than, less than (fewer), most and least</p> <p>NRICH: Dotty Six * G</p> <p>NRICH: All Change * G I</p> <p>NRICH: Eightness of Eight *</p>				<p>Number: Addition and Subtraction</p> <p>Represent and use number bonds and related subtraction facts within 10</p> <p>NRICH: Domino Sorting * I</p> <p>NRICH: One Big Triangle * G</p> <p>NRICH: Number Lines *</p> <p>NRICH: Pairs of Numbers * I</p> <p>NRICH: Weighted Numbers * G</p> <p>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.</p> <p>NRICH: How Do You See it? *</p> <p>Add and subtract one digit numbers to 10, including zero.</p> <p>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.</p>				<p>Geometry: Shape</p> <p>Recognise and name common 2-D shapes, including: (for example, rectangles (including squares), circles and triangles)</p> <p>NRICH: Shaping It * I</p> <p>NRICH: What's Happening? *</p> <p>NRICH: Jig Shapes *</p> <p>NRICH: Always, Sometimes or Never? KS1 *</p> <p>NRICH: Overlaps **</p> <p>NRICH: Three Squares *** I</p> <p>Recognise and name common 3-D shapes, including: (for example, cuboids (including cubes), pyramids and spheres.)</p>			<p>Number: Place Value</p> <p>Count to twenty, forwards and backwards, beginning with 0 or 1, from any given number.</p> <p>Count, read and write numbers to 20 in numerals and words.</p> <p>NRICH: Shut the Box * G</p> <p>NRICH: Biscuit Decorations *</p> <p>NRICH: Same Length Trains *</p> <p>NRICH: Grouping Goodies ***</p> <p>Given a number, identify one more or one less.</p> <p>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.</p>		



AUTUMN SMALL STEPS

Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	
<ul style="list-style-type: none"> Sort objects Count objects Represent objects Count, read and write forwards from any number 0 to 10 Count, read and writing backwards from any number 0 to 10 Count one more Count one less One to one correspondence to start to compare groups Compare groups using language such as equal, more/greater, less/fewer Introduce =, > and < symbols Compare numbers Order groups of objects Order numbers Ordinal numbers (1st, 2nd, 3rd ...) The number line 				<ul style="list-style-type: none"> Part whole model Addition symbol Fact families - Addition facts Find number bonds for numbers within 10 Systematic methods for number bonds within 10 Number bonds to 10 Compare number bonds Addition: Adding together Addition: Adding more Finding a part Subtraction: Taking away, how many left? Crossing out Subtraction: Taking away, how many left? Introducing the subtraction symbol Subtraction: Finding a part, breaking apart Fact families - The 8 facts Subtraction: Counting back Subtraction: Finding the difference Comparing addition and subtraction statements $a + b > c$ Comparing addition and subtraction statements $a + b > c + d$ 				<ul style="list-style-type: none"> Recognise and name 3D shapes Sort 3D shapes Recognise and name 2D shapes Sort 2D shapes Patterns with 3D and 2D shapes 		<ul style="list-style-type: none"> Count forwards and backwards and write numbers to 20 in numerals and words Numbers from 11 to 20 Tens and ones Count one more and one less Compare groups of objects Compare numbers Order groups of objects Order numbers 	



SPRING

Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11		
<p>Number: Addition and Subtraction</p> <p>Represent and use number bonds and related subtraction facts within 20</p> <p>NRICH: Butterfly Flowers *</p> <p>NRICH: Ladybirds in the Garden **</p> <p>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.</p> <p>NRICH: What Could It Be? * I</p> <p>NRICH: 2,4,6,8 ***</p> <p>Add and subtract one-digit and two-digit numbers to 20, including zero.</p> <p>NRICH: Two Dice * I</p> <p>NRICH: Sort Them Out (1) * G</p> <p>NRICH: Find the Difference ** G</p> <p>Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$</p> <p>NRICH: The Tall Tower ***</p>				<p>Number: Place Value</p> <p>Count to 50 forwards and backwards, beginning with 0 or 1, or from any number.</p> <p>Count, read and write numbers to 50 in numerals.</p> <p>Given a number, identify one more or one less.</p> <p>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.</p> <p>NRICH: Robot Monsters * I</p> <p>NRICH: Making Sticks ** I</p> <p>Count in multiples of twos, fives and tens.</p>			<p>Measurement: Length and Height</p> <p>Measure and begin to record lengths and heights.</p> <p>NRICH: How Tall? * I</p> <p>NRICH: Can You Do it Too? ** G</p> <p>Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)</p> <p>NRICH: Sizing Them Up * G</p> <p>NRICH: Different Sizes * I</p> <p>NRICH: Wallpaper **</p>		<p>Measurement: Weight and Volume</p> <p>Measure and begin to record mass/weight, capacity and volume.</p> <p>Compare, describe and solve practical problems for mass/weight: [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]</p> <p>NRICH: Bottles (1) *</p> <p>NRICH: Bottles (2) *</p> <p>NRICH: Thirsty? *</p>			



SPRING SMALL STEPS

Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11
<ul style="list-style-type: none"> • Add by counting on • Find & make number bonds • Add by making 10 • Subtraction - Not crossing 10 • Subtraction - Crossing 10 (1) • Related Facts • Compare Number Sentences 				<ul style="list-style-type: none"> • Numbers to 50 • Tens and ones • Represent numbers to 50 • One more one less • Compare objects within 50 • Compare numbers within 50 • Order numbers within 50 • Count in 2s • Count in 5s 			<ul style="list-style-type: none"> • Compare lengths and heights • Measure length 		<ul style="list-style-type: none"> • Introduce weight and mass • Measure mass • Compare mass • Introduce capacity • Measure capacity • Compare capacity 	



SUMMER

Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	
<p>Number: Multiplication and Division</p> <p>Count in multiples of twos, fives and tens.</p> <p>Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.</p> <p>NRICH: Lots of Biscuits! * NRICH: Share Bears * G</p> <p>NRICH: Doubling Fives * I</p>			<p>Number: Fractions</p> <p>Recognise, find and name a half as one of two equal parts of an object, shape or quantity.</p> <p>NRICH: Fair Feast *</p> <p>NRICH: Halving ** I</p> <p>NRICH: Happy Halving ***</p> <p>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</p> <p>Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)</p> <p>Compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]</p>		<p>Geometry: Position and Direction</p> <p>Describe position, direction and movement, including whole, half, quarter and three quarter turns</p> <p>NRICH: 2 Rings * I</p> <p>NRICH: Turning * I</p> <p>NRICH: Olympic Rings ** I</p> <p>NRICH: Tangram Tangle *** G</p>	<p>Number: Place Value</p> <p>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.</p> <p>Count, read and write numbers to 100 in numerals.</p> <p>Given a number, identify one more and one less.</p> <p>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.</p>		<p>Measure ment: Money</p> <p>Recognise and know the value of different denomina tions of coins and notes.</p>	<p>Measurement: Time</p> <p>Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.</p> <p>NRICH: Times of Day * I</p> <p>NRICH: The Games' Medals ** I</p> <p>Recognise and use language relating to dates, including days of the Wk, Wks, months and years.</p> <p>NRICH: Snap * G</p> <p>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.</p> <p>Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later]</p> <p>NRICH: The Animals' Sports Day * I</p> <p>Measure and begin to record time (hours, minutes, seconds)</p>		



SUMMER SMALL STEPS

Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11
<ul style="list-style-type: none"> Count in 10s Make equal groups Add equal groups Make arrays Make doubles Make equal groups - grouping Make equal groups - sharing 			<ul style="list-style-type: none"> Halving shapes or objects Halving a quantity Find a quarter of a shape or object Find a quarter of a quantity 		<ul style="list-style-type: none"> Describe turns Describe Position 	<ul style="list-style-type: none"> Counting to 100 Partitioning numbers Comparing numbers Ordering numbers One more, one less 		<ul style="list-style-type: none"> Recognising coins Recognising notes Counting in coins 	<ul style="list-style-type: none"> Before and after Dates Time to the hour Time to the half hour Writing time Comparing time 	