NRICH Curriculum Mapping Documents

NRICH tasks linked to the English Primary National Curriculum for mathematics in EYFS, Y1, Y2

NRICH tasks embrace the aims of the curriculum (problem solving, reasoning, fluency) as well as curriculum 'content'. However, not all objectives will have an NRICH task attached to them.

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

EYFS (Early Years Outcomes)	Year 1	Year 2
Strand 1 - Number		
Numerals • Recognises some numerals of personal significance • Recognises numerals 1 to 5 • Selects the correct numeral to represent 1 to 5, then 1 o 10 objects **Show Me** **Owl's Packing List** **Tidying** **Dice** **Golden Beans**	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward **Buzzy Bee** * **Five Steps to 50** * I

Counting • up to three or four objects by saying a number name for each item • actions or objects which cannot be moved • objects to 10, and beginning to count beyond 10 • out up to six objects from a larger group • an irregular arrangement of up to ten objects • **ELG – count reliably with numbers from one to 20** **Number Book** **Playing Incey Wincey Spider** **Shopping**	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens **Writing Digits** * **Shut the Box** * G **Biscuit Decorations** * **Same Length Trains** * **Grouping Goodies** ***	Recognise the place value of each digit in a two-digit number (tens, ones) **Snail One Hundred** * G **Two-digit Targets** * **6 Beads** **
	Given a number, identify one more and one less **Number and Place Value**	Identity, represent and estimate numbers using representations, including the number line **How We Would Count** * G I **Tug of War** * G **Count the Crayons** *

Comparing and estimating • Uses the language of 'more' and 'fewer' to compare two sets of objects • Estimates how many objects they can see and checks by counting them • ELG – with numbers from one to 20, place them in order **The Estimation Station**	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 **Robot Monsters** * I **Dotty Six** * G **All Change** * G I **Making Sticks** ** I	Compare and order numbers from 0 up to 100; use <, > and = signs **Domino Sequences** * **Next Domino** * **100 Square Jigsaw** * G **That Number Square!** * I **Domino Number Patterns** **
	Read and write numbers from 1 to 20 in numerals and words **Count the Digits** * I **What's in a Name?** ** I	Read and write numbers to at least 100 in numerals and in words
One more, one less • Says the number that is one more than a given number • **ELG – with numbers from one to 20, say which number is one more or less than a given number** **Number Rhymes** **Using Books Maisie 3**		Use place value and number facts to solve problems **I Like …** * G **Largest Even** * G **Round the Two Dice** * I **Light the Lights** *** G

Adding and subtracting

- Finds the total number of items in two groups by counting all of them
- In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting
- Records, using marks that they can interpret and explain
- **ELG – using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer**

The Box Game

Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs

How Do You See it? *

What Could It Be? * I

2,4,6,8 ***

Addition and Subtraction

Solve problems with addition and subtraction:

- using concrete objects and pictorial representations, including those involving numbers, quantities and measures
- applying their increasing knowledge of mental and written methods

Sitting Round the Party Tables * I

Two Spinners * I

Half Time *

Heads and Feet **

Noah **

Eggs in Baskets **

Birthday Cakes **

Getting the Balance *** I

Cuisenaire Counting *** G

The Brown Family *** G

Represent and use number bonds and related subtraction facts within 20

Domino Sorting * I

One Big Triangle * G

Number Lines *

Pairs of Numbers * I

Weighted Numbers * G

Butterfly Flowers *

Ladybirds in the Garden **

Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100

Strike it Out * G

Number Round Up *** G

4 Dom *** G

	Add and subtract one-digit and two-digit numbers to 20, including zero **Two Dice * I** **Sort Them Out (1) * G** **Find the Difference ** G**	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: • a two-digit number and ones • a two-digit number and tens • two two-digit numbers • adding three one-digit numbers **Cuisenaire Environment * G** **Unit Differences * I** **Dicey Addition * G** **Number Balance ** I** **Jumping Squares ** G**
	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? – 9 **The Tall Tower ***	Show that addition of two numbers can be done in any order (commutative), and subtraction of one number from another cannot **Always, Sometimes or Never? KS1 ***
Problem solving • begins to identify own mathematical problems based on own interests and fascinations • **ELG – they solve problems, including doubling, halving and sharing** **Maths Story Time** **Double Trouble** **Two Halves** **Using Books Doorbell**		Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems **The Add and Take-away Path * I** **How Many? * G** **What Was in the Box? * G** **Doing and Undoing * I** **Secret Number ** G**

	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 **Lots of Biscuits! *** **Share Bears * G** **Doubling Fives * I** **Multiplication and Division**	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers **Even and Odd * I** **Ring a Ring of Numbers * G** **Clapping Times * G I** **Double or Halve? * G** **Always, Sometimes or Never? *** **How Odd ** I** **Two Numbers Under the Microscope ** I** **Odd Times Even *** I** **More Numbers in the Ring *** G**
		Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs **Ordering Cards * G** **Which Symbol? *** **I'm Eight * I**
		Show that multiplication of two numbers can be done in any order (commutative), and division of one number by another cannot

		Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts **Our Numbers * G** **Ip Dip * I** **Magic Plant **** **The Amazing Splitting Plant ***** **The Tomato and the Bean ***** **Lots of Lollies *** I** **Growing Garlic ***** **Are You Well Balanced? *** G I**
	Recognise, find and name a half as one of two equal parts of an object, shape or quantity **Fair Feast *** **Halving ** I** **Happy Halving ***** **Fractions**	Recognise, find, name and write fractions 1/3, ¼, 2/4 and ¾ of a length, shape, set of objects or quantity
	Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	Write simple fractions e.g. ½ of 6 = 3 and recognise the equivalence of 2/4 and 1/2
EYFS (Early Years Outcomes)	**Year 1**	**Year 2**
Strand 2 – Measurement		

Length, weight and capacity

- Orders two or three items by length or height
- Orders two items by weight or capacity

Length

Making Caterpillars

Long Creatures

Wrapping Parcels 3

Sock Washing Line 3

Weight

Balances

Cooking

Presents

The Spring Scale

Capacity

I Have a Box

Mud Kitchen

Water, Water

Money

Compare, describe and solve practical problems for:

- lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
- mass or weight [for example, heavy/light, heavier than, lighter than]
- capacity/volume [for example, full/empty, more than, less than, half, half full, quarter]
- time [for example, quicker, slower, earlier, later]

Sizing Them Up * G

The Animals' Sports Day * I

Different Sizes * I

Bottles (1) *

Bottles (2) *

Wallpaper **

Measurement

Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels

Discuss and Choose * G

Little Man *

Time • Orders and sequences familiar events • Measures short periods of time in simple ways • **ELG – children use everyday language to talk about time** **Timing**	Measure and begin to record the following: • lengths and heights • mass/weight • capacity and volume • time (hours, minutes, seconds) **How Tall? * I** **Can You Do it Too? ** G**	Compare and order lengths, mass, volume/capacity and record the results using >, < and = **Order, Order! * I** **Compare the Cups *** **Making Longer, Making Shorter ** I**
	Recognise and know the value of different denominations of coins and notes	Recognise and use the symbols for pounds (£) and pence (p); combine amounts to make a particular value **Five Coins ** I**
	Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening **Times of Day * I** **The Games' Medals ** I**	Find different combinations of coins that equal the same amounts of money **Money Bags ****
	Recognise and use language relating to dates, including days of the week, weeks, months and years **Snap * G**	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change **The Puzzling Sweet Shop ****
	Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	Compare and sequence intervals of time

		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 **What's the Time?** * **Stop the Clock** *** G
		Know the number of minutes in an hour and the number of hours in a day **Matching Time** * G
EYFS (40-60+ months)	**Year 1**	**Year 2**
Strand 3 - Geometry		
Pattern • uses familiar objects and common shapes to create and recreate patterns • **ELG – They recognise, create and describe patterns** **What is your pattern?** Collecting 3	Recognise and name common 2-D and 3-D shapes, including: • 2-D shapes (for example, rectangles (including squares), circles and triangles) • 3-D shapes (for example, cuboids (including cubes), pyramids and spheres) **Shaping It** * I **What's Happening?** * **Jig Shapes** * **Always, Sometimes or Never? KS1** * **Overlaps** ** **Properties of Shapes**	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line **Shapely Lines** * I **Exploded Squares** * **Poly Plug Rectangles** * G I **Let's Investigate Triangles** * **Seeing Squares *** **Paper Patchwork 1** * **Paper Patchwork 2** * **Chain of Changes** ** **Colouring Triangles** ** I **Complete the Square** *** G **Inside Triangles** *** G

Shape • Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes • Uses familiar objects and common shapes to create and recreate patterns and build models • **ELG – They explore characteristics of everyday objects and shapes and use mathematical language to describe them** **Tubes and Tunnels** **Making Footprints** **Building Towers** **Exploring 2D Shape** **Making a Picture** **Shapes in the Bag**		Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces **Building with Solid Shapes** * I **Rolling That Cube** * I **Skeleton Shapes** ** I
		Identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid] **Cubes** * I **Shadow Play** ***

		Compare and sort common 2-D and 3-D shapes and everyday objects **Matching Triangles** * G **Data Shapes** * **Paper Partners** * **Cubes Cut into Four Pieces** ***
Position • Can describe their relative position such as 'behind' or 'next to' **Paths** **Position with Wellies** **Scooters, Trikes & Bikes** **Small World Play 3**	Describe position, direction and movement, including whole, half, quarter and three-quarter turns **2 Rings** * I **Turning** * I **Olympic Rings** ** I **Tangram Tangle** *** G **Position and Direction**	Order and arrange combinations of mathematical objects in patterns and sequences **Poly Plug Pattern** * G **Triple Cubes** * G **Repeating Patterns** * I **Domino Patterns** * I **Circles, Circles** * **Break it Up!** * I **School Fair Necklaces** ** I **Hundred Square** ** **Three Ball Line Up** ** **A City of Towers** ** **Caterpillars** ** I

		Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) **Turning Man * I** **Walking Round a Triangle *** **Cover the Camel *** **Triangle Animals ****
EYFS (Early Years Outcomes)	**Year 1**	**Year 2**
Strand 4 - Statistics		
	Statistics	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables **Sticky Data * G** **If the World Were a Village * I** **What Shape and Colour?* G** **Carroll Diagrams *** **Ladybird Count *** **Plants ****

		Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity **Sort the Street** * **Button-up** * **Beads and Bags** * **The Hair Colour Game** ** G **Mixed-up Socks** ** I
		Ask and answer questions about totalling and comparing categorical data **In the Playground** * I