**Maths – Reception and Year 1 – Planning and links with NRICH**

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| ***Key skills:***Aim: To develop an ‘I can’ attitude to maths.* Using key equipment / models and images
* Using jottings to develop thinking
* Developing attitudes to maths – e.g. through use of ‘one question / multiple answers’

Aim: To use Assessment for Learning to identify children’s next-steps in learning. * Using National Strategies ‘Securing Levels’ resources and/or NCETM ‘teaching for mastery - questions, tasks and activities to support assessment’ resources
* Using sample calculations to see how (including which equipment) children choose to solve them, as well as how they choose to record any working out.

Year R: Using everyday problems communicated verbally involving addition, subtraction, multiplying and sharing fairly (e.g. fruit at snack time)Year 1: 9 + 7 ….. 17 – 8 ….. 2 X 5 ….. 10 ÷ 2 |

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| **Column headings** |
| **RECEPTION**objectives40-60+m is age band from Development Matters (DM), ELG is Early Learning Goal for end of Reception | **YEAR 1**objectives | **ON THE BOIL**5 min (or less) daily maths often not in maths session to practice number skills | **NRICH RESOURCES** Problem solving |

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| **Place Value** |
| **RECEPTION** | **YEAR 1** | **ON THE BOIL** | **NRICH RESOURCES** |
| ***Comparing numbers:*****40-60+m** - uses the language of ‘more’ or ‘fewer’ to compare two sets of objects**ELG:** Children say which number is one more or one less than a given number | ***Comparing numbers:***- use the language of: equal to, more than, less than (fewer), most, least  | ***Counting:*****Reception** **40-60+m**- count up to 3 or 4 objects by saying one number name for each item- count objects or actions which cannot be moved- count objects to 10 and beginning to count beyond 10- count an irregular arrangement of up to 10 objects **Year 1**- count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens- given a number, identify one more and one less  | ***Comparing numbers:*****Reception****NRICH:** [**Number book**](https://nrich.maths.org/10989)**NRICH:** [**Dressing up**](https://nrich.maths.org/9889)**NRICH:** [**Golden beans**](https://nrich.maths.org/9969)**NRICH:** [**Collecting**](https://nrich.maths.org/content/id/8864/Collecting.pdf)**NRICH:** [**Playing Incy Wincy Spider**](https://nrich.maths.org/8389)**Year 1****NRICH:** [**Making Sticks**](http://nrich.maths.org/public/viewer.php?obj_id=231) **\*\*****NRICH:** [**Robot Monsters**](http://nrich.maths.org/2404) **\*****NRICH:** [**Dotty Six**](http://nrich.maths.org/7337) **\*****NRICH:** [**All Change**](http://nrich.maths.org/7514) **\*** |
| ***Identifying and representing and numbers:*****40-60+m**- estimate how many objects they can see and check by counting them- recognise some numerals of personal significance- recognise numerals 1 to 5- select the correct numeral to represent 1 to 5, then 1 to 10 - record using marks that they can interpret and explain**ELG:** - Count reliably with numbers from 1 to 20- They place them in order**Exceeding:** Children estimate a number of objects and check quantities by counting up to 20 | ***Identifying, representing and estimating numbers:***-identify and represent numbers using objects and pictorial representations including the number line | ***Identifying, representing and estimating numbers:*****Year 1****NRICH:** [**What’s in a Name?**](http://nrich.maths.org/7952) **\*\*****NRICH:** [**Count the Digits**](http://nrich.maths.org/7302) **\*** |
| ***Reading and writing numbers:****-* read and write numbers from 1 to 20 in numerals and words | ***Reading and writing numbers:*****Year 1:****NRICH:** [**Writing Digits**](http://nrich.maths.org/public/viewer.php?time=1228319356&obj_id=161) **\*****NRICH:** [**Shut the Box**](http://nrich.maths.org/6074) **\*****NRICH:** [**Biscuit Decorations**](http://nrich.maths.org/public/viewer.php?obj_id=154) **\*****NRICH:** [**Grouping Goodies**](http://nrich.maths.org/public/viewer.php?obj_id=232) **\*\*\*** |

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| **Addition and Subtraction** |
| **RECEPTION** | **YEAR 1** | **ON THE BOIL** | **NRICH RESOURCES** |
| ***Estimating, Number bonds, Mental calculation:*****40-60+m** - count up to three or four objects by saying one number name for each - count objects or actions which cannot be moved- count objects to 10 and begin to count beyond 10- count an irregular arrangement of up to 10 objects- count out up to six objects from a larger group- find the total number of items in two groups by counting all of them- in practical activities and discussion begin to use the vocabulary involved in adding and subtracting- record using marks they can interpret and explain- begin to identify own mathematical problems based on own interests and fascinations**ELG:** Children use quantities and objects to add and subtract two single digit numbers and count on or back to find the answer**Exceeding:** Children estimate a number of objects and check quantities by counting up to 20 | ***Number bonds:***- represent and use number bonds and related subtraction facts within 20 | ***Number and place value:*****Reception**- **40-60+m:** Use familiar objects and common shapes to create and recreate patterns and build models - **ELG;** recognise, create and describe patterns**Additional skills to support understanding:**- Make numbers to 10/20 using structured apparatus- Practise using numbers in terms of ordinality, i.e. 1st, 2nd, 3rd in context - Subitise dots up to three /six in regular dice patterns**Year 1**- Partition numbers to five in as many ways as possible- Use apparatus to create and recreate repeating patterns- Make teens numbers using structured apparatus- Practise using numbers in terms of ordinality, i.e. 1st, 2nd, 3rd, 4th to 10th in context- Subitise dots up to six in regular dice patterns | ***Number bonds:*****Reception****NRICH:** [**Paths**](https://nrich.maths.org/8858)**NRICH:** [**Golden beans**](https://nrich.maths.org/9969)**NRICH:** [**Two Dice**](https://nrich.maths.org/150)**NRICH:** [**Making a picture**](https://www.google.co.uk/search?q=nrich+making+a+picture&oq=nrich+making+a+picture&gs_l=psy-ab.3..0.265100.269782.0.270701.23.23.0.0.0.0.166.2800.1j22.23.0....0...1.1.64.psy-ab..0.23.2775...0i22i30k1j0i67k1.HZLcwP_7gas)**NRICH:** [**Collecting**](https://nrich.maths.org/content/id/8864/Collecting.pdf)**NRICH:** [**Playing Incy Wincy Spider**](https://nrich.maths.org/content/id/8863/Incey%20Wincey.pdf)**NRICH:** [**Number rhymes**](https://nrich.maths.org/8859)**NRICH:** [**Tidying**](https://nrich.maths.org/8856)**NRICH:** [**Queuing**](https://nrich.maths.org/content/id/8857/Queuing.pdf)**NRICH:** [**Washing line**](https://nrich.maths.org/content/id/9891/WashingLine.pdf)**Year 1****NRICH:** [**Domino Sorting**](http://nrich.maths.org/public/viewer.php?obj_id=4940) **\*****NRICH:** [**One Big Triangle**](http://nrich.maths.org/public/viewer.php?obj_id=192) **\*****NRICH:** [**Ladybirds in the Garden**](http://nrich.maths.org/public/viewer.php?obj_id=1816) **\*\*****NRICH:** [**Number Lines**](http://nrich.maths.org/public/viewer.php?obj_id=5652) **\*****NRICH:** [**Pairs of Numbers**](http://nrich.maths.org/7233) **\*****NRICH:** [**Weighted Numbers**](http://nrich.maths.org/public/viewer.php?obj_id=4726) **\*****NRICH:** [**Butterfly Flowers**](http://nrich.maths.org/public/viewer.php?obj_id=229) **\*** |
| ***Mental calculation:***- add and subtract one-digit and two-digit numbers to 20, including zero- read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods) |
| ***Written methods:***-read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation) | ***Mental calculation:*****Year 1****NRICH:** [**Two Dice**](http://nrich.maths.org/150) **\*****NRICH:** [**Find the Difference**](http://nrich.maths.org/public/viewer.php?obj_id=6227) **\*\*****NRICH:** [**Sort Them Out (1)**](http://nrich.maths.org/6885) **\*** |
| ***Written methods:*****Year 1****NRICH:** [**2,4,6,8**](http://nrich.maths.org/public/viewer.php?time=1188566002&obj_id=175) **\*\*\*****NRICH:** [**How Do You See it?**](http://nrich.maths.org/8296) **\*** |
| ***Problem solving:*****40-60+m** - begins to identify own mathematical problems based on own interests and fascinations **ELG:** Children solve problems, including doubling, halving and sharing**Exceeding:** They solve practical problems that involve combining groups of 2,5 or 10, or sharing into equal groups | ***Problem solving:***- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = 🗆 - 9 | **Reception****NRICH:** [**Maths story time**](https://nrich.maths.org/9718)**NRICH:** [**Tidying**](https://nrich.maths.org/8856)**NRICH:** [**Baskets**](https://nrich.maths.org/9716)**NRICH:** [**Small world play**](https://nrich.maths.org/content/id/9722/SmallWorldPlay.pdf) |

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| **Multiplication and Division** |
| **RECEPTION** | **YEAR 1** | **ON THE BOIL** | **NRICH RESOURCES** |
| ***Problem solving:*****40-60+m** - begins to identify own mathematical problems based on own interests and fascinations. **ELG:** Children solve problems, including doubling, halving & sharing**Exceeding:** They solve practical problems that involve combining groups of 2,5 or 10, or sharing into equal groups | ***Problem solving:***- 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 | **Reception and Year 1** Continue number skills above/ below | **Year 1****NRICH:** [**Lots of Biscuits!**](http://nrich.maths.org/6883) **\*****NRICH: [Share Bears](http://nrich.maths.org/public/viewer.php?obj_id=2358) \*** |

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| **Fractions** |
| **RECEPTION** | **YEAR 1** | **ON THE BOIL** | **NRICH RESOURCES** |
| ***Recognising fractions:*****ELG:** Children solve problems, including doubling, halving & sharing**Exceeding:** They solve practical problems that involve … sharing into equal groups | ***Recognising fractions:***- recognise, find & name a half as one of two equal parts of an object, shape or quantity  | **Reception and Year 1** Continue number skills above/ below | **Year 1****NRICH: [Halving](http://nrich.maths.org/public/viewer.php?obj_id=1788) \*\*** **NRICH:** [**Happy Halving**](http://nrich.maths.org/217) **\*\*\***  |

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| **Measurement** |
| **RECEPTION** | **YEAR 1** | **ON THE BOIL** | **NRICH RESOURCES** |
| ***Comparing and estimating:*****40-60+m**- order two or three items by length or height- order two or three items by weight or capacity- use everyday language about time- order and sequence familiar events - measure short periods of time in simple ways- begin to use everyday language related to money**ELG:** Children use everyday language to talk about size, weight, capacity, time and money to compare quantities and objects and to solve problems**Exceeding:** Children estimate, measure, weigh and compare and order objects  | ***Comparing and estimating:***- compare, describe and solve practical problems for: \* lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] \* mass/weight [e.g. heavy/light, heavier than, lighter than] \* capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] \* time [e.g. quicker, slower, earlier, later]- sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] | ***Addition and subtraction:*****Reception:****40-60+m**: say the number that is one more than a given number.- finds one more or one less from a group of up to five objects then ten objects.**ELG:** Say which number is one more or one less than a given number.**Additional skills to support understanding:**- recognise that a value of objects are the same, even if they are laid out differently (conservation of number)- use structured apparatus to understand the concept of equality**Year 1:**- Use stories, pictures and objects to build up the story of all numbers to five.- find totals by counting all- recognise that a value of objects are the same, even if they are laid out differently (conservation of number)- use structured apparatus to understand the concept of equality | ***Comparing and estimating:*****Reception****NRICH:** [**Socks**](https://nrich.maths.org/11218)**NRICH:** [**Balances**](https://nrich.maths.org/10892)**NRICH:** [**Scooters bikes and trikes**](https://nrich.maths.org/10795)**NRICH:** [**Cooking**](https://nrich.maths.org/10698)**NRICH:** [**Mud kitchen**](https://nrich.maths.org/10499)**NRICH:** [**I have a box**](https://nrich.maths.org/10212)**NRICH:** [**Making caterpillars**](https://nrich.maths.org/8861)**NRICH:** [**Packing**](https://nrich.maths.org/9719)**NRICH:** [**Presents**](https://nrich.maths.org/9720)**NRICH:** [**Long creatures**](https://nrich.maths.org/9717)**NRICH:** [**Shopping**](https://nrich.maths.org/9721)**NRICH:** [**Tubes and tunnels**](https://nrich.maths.org/9724)**Year 1:****NRICH:** [**Wallpaper**](http://nrich.maths.org/public/viewer.php?obj_id=4964) **\*\*****NRICH:** [**Sizing Them Up**](http://nrich.maths.org/public/viewer.php?obj_id=4962) **\*****NRICH:** [**The Animals’ Sports Day**](http://nrich.maths.org/7789) **\*****NRICH:** [**Different Sizes**](http://nrich.maths.org/8117) **\*****NRICH:** [**The Games’ Medals**](http://nrich.maths.org/7763) \*\***NRICH:** [**Times of Day**](http://nrich.maths.org/public/viewer.php?obj_id=6609) **\*** |
| ***Measuring and calculating:***- measure and begin to record: **\*** lengths and heights \* mass/weight \* capacity and volume \* time (hours, minutes, seconds**)** **-** recognise and know the different value of denominations of coins and notes | ***Measuring and calculating:*****Year 1****NRICH:** [**How Tall?**](http://nrich.maths.org/7536) **\*****NRICH:** [**Can You Do it Too?**](http://nrich.maths.org/8327) **\*\*** |
| ***Telling the time:*****40-60+m** - use everyday language related to time.- order and sequence familiar events.- measure short periods of time in simple ways**ELG:** Children use everyday language to talk about …time …. to solve problems**Exceeding:** Children … talk about …. time | ***Telling the time:***- tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.- recognise and use language relating to dates, including days of the week, weeks, months and years |  | **Reception****NRICH:** [**Timing**](https://nrich.maths.org/9723) |
| **Properties of Shapes** |
| **RECEPTION** | **YEAR 1** | **ON THE BOIL** | **NRICH RESOURCES** |
| ***Identifying shapes and their properties:*****40-60+m** - Selects a particular named shape. - Begins to use mathematical names for ‘solid’ 3D shapes and ‘flat’ 2D shapes, and mathematical terms to describe shapes**ELG:** children explore the characteristics of everyday objects and shapes and use mathematical language to describe them**Exceeding:** Children …. talk about properties | ***Identifying shapes and their properties:***- recognise and name common 2-D and 3-D shapes, including: \* 2-D shapes [e.g. rectangles (including squares), circles and triangles] \* 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].  | ***Counting:*****Reception** additional skills to support understanding:-Count to and across 5/10/20, forwards and backwards, beginning with 0 or 1, or from any given number**Year 1**- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number | **Reception** **NRICH:** [**Shapes in a bag**](https://nrich.maths.org/10387)**NRICH:** [**Building towers**](https://nrich.maths.org/8865)**NRICH:** [**Making a picture**](https://www.google.co.uk/search?q=nrich+making+a+picture&oq=nrich+making+a+picture&gs_l=psy-ab.3..0.213674.219582.0.223868.32.29.0.0.0.0.363.3523.1j20j2j1.24.0....0...1.1.64.psy-ab..9.23.3140...33i21k1j33i160k1j0i22i30k1j0i67k1.-9KpqzX46m4)**NRICH:** [**Making footprints**](https://nrich.maths.org/8860)**NRICH:** [**Exploring 2D shapes**](https://nrich.maths.org/content/id/8852/Exploring%202-d%20shape.pdf)**NRICH:** [**Tidying**](https://nrich.maths.org/8856)**NRICH:** [**Tubes and tunnels**](https://nrich.maths.org/9724)**NRICH:** [**Wrapping parcels**](https://nrich.maths.org/content/id/9890/WrappingParcels.pdf)**Year 1****NRICH:** [**Shaping It**](http://nrich.maths.org/7301) **\*****NRICH:** [**What’s Happening?**](http://nrich.maths.org/7810) **\*** |

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| **Position and Direction** |
| **RECEPTION** | **YEAR 1** | **ON THE BOIL** | **NRICH RESOURCES** |
| ***Position:*****40-60+m**- can describe their position as ‘behind’ or ‘next to’**ELG:** Children use everyday language to talk aboutposition to compare and to solve problems**Exceeding:** Children ..talk about time | ***Position, direction and movement:***- describe position, direction and movement, including half, quarter and three-quarter turns. | **Reception and Year 1** Continue number skills above | **Reception****NRICH:** [**Scooters bikes and trikes**](https://nrich.maths.org/10795)**NRICH:** [**Paths**](https://nrich.maths.org/8858)**Year 1****NRICH:** [**Tangram Tangle**](http://nrich.maths.org/2398) **\*\*\*****NRICH:** [**Olympic Rings**](http://nrich.maths.org/7551) **\*\*****NRICH:** [**2 Rings**](http://nrich.maths.org/public/viewer.php?obj_id=5330) **\*****NRICH:** [**Turning**](http://nrich.maths.org/public/viewer.php?obj_id=5656) **\*** |