Numeracy and Maths Experiences & Outcomes Progression: First Level

Please read guidance before using these progression sheets

Experiences and Outcomes	Progress		
Estimating and Rounding *I can share ideas with others to develop ways to estimate the answer to a calculation or problem, work out the actual answer, then check my solution by comparing it with estimates.* *MNU 1-01a*	Understand the word estimate Make reasonable estimates of small quantities using concrete materials Check accuracy of estimates by counting	Estimate position of numbers on a number line to 10, 100 Estimate to nearest 10 using number line, washing line and hundred square Estimate quantities to 20	Estimate position of numbers on a number line, including finding numbers halfway and quarter way between two given numbers Round two digit numbers to nearest 10 Use round numbers to estimate answers to addition and subtraction
Number and Number Processes *I have investigated how whole numbers are constructed, can understand the importance of zero within the system and use my knowledge to explain the link between a digit, its place and its value* *MNU 1-02a*	Count, make, read, verbalise & write numbers to 20. Order numbers to 20. Read & use ordinal numbers to 20. Read and sequence numbers to 100. Count in 2s, 5s and 10s. Use odds and evens to 20. Recognise the role of zero as a place holder.	Count, make, read, verbalise & write numbers to 100. Count on and back 2 and 10 for digit numbers. Count in 5, 10, 2, 4 (link to money). Give numbers before and after. Read and use ordinal numbers to 100. Read and sequence numbers to 1000. Use odd and evens beyond 20. Recognise the role of zero as a place holder in 3 digit numbers.	Count, order, read, verbalise & write numbers to 1000. Count on and back 5, 3, 9, 11 within 100. Count on and back 2, 10 within 1000. Count in 3, 6, 9, 20, 50, 100, 8 (link to money). Read and sequence beyond 1000. Extend odd and evens. Recognise the role of zero as a place holder in larger numbers.

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Addition *I can use addition when solving problems, making the best use of the mental strategies and written skills I have developed.* *MNU 1-03a*	Use language of addition. Quick recall of addition facts to 10. Exploring strategies to add mentally within 20 including money. Exploring written methods to add horizontally and vertically 2 and 3 numbers within 20. Link plus and minus facts. Complementary addition to 10 and 20. Begin to apply knowledge and skills of addition in written and practical problems.	Use language of addition. Quick recall of addition facts to 20. Exploring strategies to add mentally within 100 including money. Exploring written methods to add horizontally and vertically to 100 including money. Link plus and minus facts. Add 10 to a single digit number. Adding multiples of 10 to a 2 digit number. Add single digit or a 2 digit number to a 2 digit number including bridging. Apply knowledge and skills of addition in written and practical problems.	Extend language of addition. Extend quick recall of addition facts. Exploring strategies to add mentally within 1000 including money. Exploring written methods to add horizontally and vertically to 1000 including money. Link plus and minus facts. Adding multiples of 10 and 100 to a 3 digit number. Add a 3 digit number to a 3 digit number including bridging. Apply knowledge and skills of addition in written and practical problems.

Experiences and Outcomes	Progress		
Subtraction *I can use subtraction when solving problems, making the best use of the mental strategies and written skills I have developed.* *MNU 1-03a*	Use language of subtraction. Quick recall of subtraction facts to 10. Exploring strategies to subtract mentally within 20 including money. Exploring written methods to subtract horizontally and vertically 2 and 3 numbers within 20. Link plus and minus facts. Missing number subtraction to 10 and 20 i.e. 12 - __ =.6 Begin to apply knowledge and skills of subtraction in written and practical problems.	Use language of subtraction. Quick recall of subtraction facts to 20. Exploring strategies to subtract mentally within 100 including money. Exploring written methods to subtract horizontally and vertically to 100 including money. Link plus and minus facts. Subtracting multiples of 10 from a 2 digit number. Subtract single digit or a 2 digit number from a 2 digit number including bridging. Apply knowledge and skills of subtraction in written and practical problems.	Extend language of subtraction. Extend quick recall of subtraction facts. Exploring strategies to subtract mentally within 1000 including money. Exploring written methods to subtract horizontally and vertically to 1000 including money. Link plus and minus facts. Subtracting multiples of 10 and 100 from a 3 digit number. Subtract a 3 digit number from a 3 digit number including bridging. Apply knowledge and skills of subtraction in written and practical problems.

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Multiplication *I can use multiplication when solving problems, making the best use of the mental strategies and written skills I have developed.* *MNU 1-03a*	Introduce the concept of multiplication and the associated language. Link multiplication with repeated addition. Introduce the 2 times table and link to doubles. Introduce x sign. Introduce commutative aspect. Count and order in 2s, 5s and 10s.	Develop the concept of multiplication and the associated language. Learn 2,3,4,5,and 10 times tables with quick recall. Multiply single digits horizontally and vertically using tables. Introduce the multiplication of 2 digit numbers. Link multiplication and division. Apply knowledge and skills of multiplication in written and practical problems.	Extend the concept of multiplication and the associated language. Learn 6,7,8 and 9 times tables with quick recall. Multiply 2 and 3 digit numbers horizontally and vertically using tables. Link multiplication and division. Apply knowledge and skills of multiplication in written and practical problems.

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Division *I can use division when solving problems, making the best use of the mental strategies and written skills I have developed.* *MNU 1-03a*	Introduce the concept of division and the associated language: sharing and grouping. Introduce 1/2. Introduce the division sign.	Develop the concept of division and the associated language of sharing and grouping. Consolidate 2,3,4,5,and 10 times tables to apply to division calculations. Divide mentally within the tables. Introduce written formats for division. Introduce dividing with remainders. Introduce fractions linked to tables for example 1/4. Link multiplication and division. Apply knowledge and skills of division in written and practical problems.	Extend the concept of division and the associated language. Consolidate 6,7,8 and 9 times tables to apply to division calculations. Divide mentally within the tables. Divide 2 and 3 digit numbers using both written formats including remainders. Link multiplication and division. Apply knowledge and skills of division in written and practical problems.
Fractions and Decimals *Having explored fractions by taking part in practical activities, I can show my understanding of:* • *How a single item can be shared equally.* • *The notation and vocabulary associated with fractions.* • *Where simple fractions lie on the number line.* *MNU1-07a*	Practical activities only. Halves and quarters. Begin to recognise halves and quarters of shapes, recognise notation, use associated language and put half on washing line.	Halves and quarters: Find halves and quarters of quantities, use correct notation to record. Using a number stick (0 to 1), recognise half and quarter.	Using a number stick (0-1), recognise halves and quarters and place on a number line. Recognise ½, 1/3, ¼, 1/5, 1/10 – use to find fractions of numbers and shapes. Begin to find remainders. Identify the numerator and denominator of simple fractions.

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Through exploring how groups of items can be shared equally, I can find a fraction of an amount by applying my knowledge of division. *MNU1-07b*	Sharing out equally and cutting into equal smaller parts. Sets with sharing.	Concept of division. Sharing and grouping. Introduce sign ÷ Recognise the variety of language and written forms associated with fractions and division e.g. half of 16, ½ of 16, 16 shared equally between 2.	Find fractions of numbers (one and two digit) and shapes. Link 50p to ½ £, 25p to ¼ £. Recognise and use a variety of language and written forms associated with fractions and division.
Through taking part in practical activities including use of pictorial representations I can demonstrate my understanding of simple fractions which are equivalent. *MNU1-07c*	Folding in half shapes, half of food etc., matching activities.	Explore link between 1 and 2/2 Folding shapes in quarters, ¼ of food etc., matching activities.	Explore link between ½ and 2/4, 1 and 4/4, ½ and 5/10 etc. Show an understanding of the term equivalent.
Money *I can use money to pay for items and can work out how much change I should receive.* *MNU 1-09a*	Recognise all coins up to £1. Use coins up to 20p in role play to pay and give change Count in 2ps & 10ps.(link to oral number work)	Revise coins to £1. Recognise £2, £5 Find totals to £1. Count in 2p, 5p,10p (link to oral number work). Give change from 20p, 50p, £1.	Recognise all coins and notes to £10 Find totals to £10. Count in 20p, 50p (link to oral number work). Give change from £10.

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I have investigated how different combinations of coins and notes can be used to pay for goods or be given in change. *MNU 1-09b*	Find totals to 20p. Give change from 20p Use symbols Explore equivalents 5p, 10p	Give change from £1 by counting on Equivalents for 20p, 50p & £1	All equivalents to £10 Convert £ to pence and pence to £ Decimal notation
Time *I can tell the time using 12 hour clocks, realising there is a link with 24 hour notation, explain how it impacts on my daily routine and ensure that I am organised and ready for events throughout my day.* *MNU 1-10a* **Practical activities using clocks, whiteboards and timers across First Level*	Revision using clocks – o'clock Telling the time – analogue and digital - whole and ½ hours half past Sequence time in a day	Telling the time – analogue and digital - hours & mins Use ¼ past and ¼ to, – digital & analogue. Know time ½ hour before and after Know time equivalents – hours in a day	Telling the time – analogue and digital Read & write time in 5mins. Understand & use am & pm. Know time ¼ hour, 10 minutes, 5 minutes before and after Know time equivalents - 60 seconds in 1 minute

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I can use a calendar to plan and be organised for key events for myself and my class throughout the year *MNU 1-10b*	Calendars Read, sequence & use days, months and seasons. Know birthday month Know month before and after Know time equivalents -7 days, 12 months, 4 seasons	Calendars Sequence and relate time in months to seasons Know months for key festivals and events Know 2 weeks/14 days in a fortnight	Calendars Work with calendar to find day, Predict date week before and after, number of days/weeks to key events Know time equivalents – days in year Know number of days in each month
I have begun to develop a sense of how long tasks take by measuring the time taken to complete a range of activities using a variety of timers. *MNU 1-10c*	Use timer for activities	Estimate and measure time in seconds	Estimate and measure time in seconds and minutes

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Measurement *I can estimate how long or heavy an object is or what amount it holds using everyday things as a guide them measure or weigh it using appropriate instruments and units.* *MNU 1-11a*	Length: Add measurement in application in non-defined units e.g. span, feet, cubes, straws etc Subtract measurement in application in non-standard units. Place sets of objects in order of length. Weight: Measure weight in convenient non standard units by using cubes etc. Add measurement in application in non-standard units. Subtract measurement in application using non-standard units. Place sets of objects in order of weight. Capacity Measure volume in convenient non-standard units. Place sets of objects in order of volume. add measurement in application in non standard units. Subtract measurement in application in non standard units.	Length: Estimate length in convenient non standard units and then measure to check accuracy. Weight: Estimate weight in convenient non-standard units and then measure to check accuracy. Measure weight using 1kg and 1/2 kg Capacity Estimate value in convenient non standard units and then measure to check accuracy. Measure volume using litre and 12 litres.	Measure lengths in 1m,half m, quarter m and cm. Weight: Read Scales on measuring devices to the nearest graduation where each graduation is labelled. Add and subtract 2 digit. measure to 2 digits. Capacity Comparison of capacity ion non standard units. Introduce the litre as a standard unit of measure. Introduce calculations.
I can estimate the area of a shape by counting squares or other methods. *MNU 1-11b*	Introduce the concept and language associated with area through practical activities.	Introduce the concept that shapes are covered by non-standard units such as counters, coins and squares to make comparisons.	Using non-standard units of measurement to estimate and compare the area of shapes. Use squared paper to count area of a given shape and draw simple shapes with a set area.(Whole squares initially then leading to ½ squares and approximation.

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Maths Impact on The World I have discussed the important part that numbers play in the world and have explored a variety of systems that have been used by civilisations throughout history to record numbers. MTH 1 -12a	Links to all other curricular areas • Time eg PE • Money eg Enterprise, Money Week • Currency eg structured play • Measure eg weather This is obviously not an exhaustive list.	Links to all other curricular areas • Time eg target setting • Money eg Enterprise, Money Week • Maths inventions eg transport • Measure eg Local Study This is obviously not an exhaustive list.	Links to all other curricular areas • Time eg PE/Health • Money eg Fair Trade • Currency eg Modern Languages • Measure eg Global Citizenship This is obviously not an exhaustive list.
Patterns and relationships *I can continue and devise more involved repeating patterns or designs, using a variety of media*. MTH 1-13a	Describe, continue and make patterns using shape colour etc. Describe and continue simple number sequences within 20. Odds and evens. Problem solving strategies- Look for a pattern.	Describe, continue and make patterns. Link to tables Describe and continue simple number sequences within 100. Problem solving strategies- Look for a pattern.	Describe, continue and make patterns. Link to tables Describe and continue simple number sequences. Problem solving strategies- Look for a pattern.

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Through exploring number patterns, I can recognise and continue simple number sequences and can explain the rule I've applied. MTH 1-13b	Describe, continue and make patterns using shape colour etc. Describe and continue simple number sequences within 20. Odds and evens. Problem solving strategies- Look for a pattern.	Describe, continue and make patterns. Link to tables Describe and continue simple number sequences within 100. Problem solving strategies- Look for a pattern.	Describe, continue and make patterns. Link to tables Describe and continue simple number sequences. Problem solving strategies- Look for a pattern.

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Expressions and equations I can compare, describe and show number relationships, using appropriate vocabulary and the symbols for equals, not equal to, less than and greater than.	Understand and use = Find the missing number in statements Eg 3 + ■= 6, ■+3 = 8 Compare and describe 3+2 = 1 + ■ Problem solving strategy – work backwards	Understand and use = and not equal ≠ Find missing number in statements Eg 9 = 3 + ■, 12 = ■ + 2 Compare and describe statements using = and ≠ Problem solving strategy – work backwards	Understand and use =, ≠, >, and, < Use number machines to find numbers Complete number statements using >, and <

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When a picture or symbol is used to replace a number in a number statement, I can find its value using my knowledge of number facts and explain my thinking to others. MTH 1-15b	Find the missing number in statements Eg 3 + ■= 6, ■+3 = 8 Compare and describe 3+2 = 1 + ■ Problem solving strategy – work backwards	Find missing number in statements Eg 9 = 3 + ■, 12 = ■ + 2 Compare and describe statements using = and ≠ Problem solving strategy – work backwards	Use number machines to find numbers Complete number statements using >, and <

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Shape, Position and movement **Properties of 2D shapes and 3D objects.** I have explored simple 3D objects and 2D shapes and can identify, name and describe their features using appropriate vocabulary. MTH 1-16a	Recognise, name and sort cylinder, cube, cuboid, sphere & cone. Discuss properties such as faces, edges and corners. Use them to make and copy models and patterns. Recognise, name and sort circle, square, rectangle, triangle, hexagon and pentagon. Discuss properties such as sides and corners. Use them to make and copy pictures and patterns.	Recognise, name and sort 3D shapes including square base pyramid and triangular prism. Use 3D shapes to make models and patterns. Use formal language of 3D shape. Recognise, name and sort 2D shapes including hexagon, pentagon and octagon. Use formal language of 2D shape.	Further explore properties of different pyramids and prisms, including triangular base pyramid. Make skeletal models of 3D shapes. Sort 3D shapes by property. Recognise, name and know some properties of 2D shape. Recognise shapes which are regular and irregular. Identify right angles in shapes.
I can explore and discuss how and why different shapes fit together and create a tiling pattern with them. MTH 1-16b		Use 2D shapes to investigate shapes that will tile.	Copy and continue a tiling pattern.

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Angle, Symmetry and Transformation I can describe, follow and record routes and journeys using signs, words and angles associated with direction and turning. MTH 1-17a	Moving forward and back, left and right. Use everyday language to describe position, direction and movement.	Left and right as clockwise and anti-clockwise. Whole, half and quarter turns. Positional language including north, south, east and west. Recognise right angles.	Simple journeys using north, south, east and west. Identifying / measuring right angles in the environment using right angle measurer. Number of right angles on straight line or full revolution. Right angle = 90
I have developed an awareness of where grid reference systems are used in everyday contexts and can use to locate and describe position. MTH 1-18a	Explore grids through play. Moving forward, back, left and right.	Instructions for simple journeys using north, south, east and left. Locate items on simple grid using positional language.	Simple routes using north, south, east and west. Give and record instruction using right angles. Read and write simple grid references to describe position.
I have explored symmetry in my own and the wider environment and can create and recognise symmetrical pictures, patterns and shapes. MTH 1-19a	Create simple symmetrical shapes. Recognise 1 line of symmetry.	Finding 1 line of symmetry. Continue simple symmetrical patterns.	Create and continue more complex symmetrical patterns with 1 line of symmetry.

Experiences and Outcomes	Progress		
Data Analysis *I have explored a variety of ways in which data is presented and can ask and answer questions about the information it contains,* MNU 1-20a	Interpret information from displays by locating and counting.	Interpret information from displays by asking and answering specific questions including some about similarities and differences.	Interpret information from displays by identifying the most and least frequent items. Interpret information from displays by asking and answering specific questions including some about similarities and differences.
Data Analysis *I have used a range of ways to collect information and can sort it in a logical, organised and imaginative way using my own and others criteria* MNU 1- 20b	Collect information from a range of sources eg picture, story. Collect information about themselves and familiar objects. Organise information collected by using simple techniques such as one-to-one mapping, pictograms and Carroll Diagrams Use tally marks to record collections of objects	Collect information for a display from a range of sources. Conduct a class survey. Use tally marks to record collections of objects Use simple pictograms, graphs and Carroll Diagrams	Collect information for a display from a range of sources. Collect information using a simple yes/no questionnaire. Collect information using a Carroll Diagram

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Data Analysis Using technology and other methods, I can display data simply, clearly and accurately by creating tables, charts and diagrams, using simple labelling and scale MTH 1-21a	Display information using real objects Display information using pictures Display information by using simple diagrams such as one-to-one mapping. Use a simple ICT package eg Starting Graph	Use tables, charts and diagrams to display information. Construct a simple bar graph with axes graduated in units and with discrete categories of information. Use an appropriate computer package to display data collected eg Starting Graph	Use charts and graphs, with frequency axis labelled in twos to collect information. Use Carroll Diagrams to display information. Use Venn Diagrams to display information.
Ideas of chance and uncertainty *I can use appropriate vocabulary to describe the likelihood of events occurring using the knowledge and experiences of myself and others to guide me.* *MNU 1-22a*	Understand what terms such as certain more likely/least likely possible, impossible, chance and uncertainty mean. Become familiar with the vocabulary through games. Picking cubes/shapes at random out of bag.	Verbally justify their reasons describing a likelihood of events.	Able to relate and use past experiences of their own and others to guide their thoughts and discussions.