SBC Numeracy and Mathematics Progression Pathway

First Level

Rationale:

- This progression pathway provides guidance for practitioners around planning learning, teaching and assessment within numeracy and mathematics.
- It supports sustained improvement and strives to provide increased clarity and consistency across Scottish Borders Council schools and settings.

Pedagogical Approach:

- The Concrete, Pictorial, Abstract approach (CPA) is embedded throughout the progression pathway to allow learners to develop a strong conceptual understanding, explore mathematical structures and build connections within numeracy and mathematics.

Structure and Layout:

- There are three clear phases within the progression pathway: Phase 1, Phase 2 and Phase 3. Each benchmark is presented at the end of Phase 3.
- Practitioners should work down each phase (e.g P2 should work down Phase 1 content) however numeracy content should be explored across each phase to provide increased challenge where required.
- The eight mathematical skills are highlighted in green throughout the progression pathway and should be fully considered within the planning process.
- Mathematical vocabulary is detailed for each phase. Mathematical language from the previous phase should be consolidated and revised, prior to building in the new vocabulary.
- As learners progress across each phase their conceptual understanding, procedural fluency and ability to explain, justify and reason their mathematical thinking should develop.

Contents:

CURRICULUM ORGANISER: ROUNDING AND ESTIMATION		**EXPERIENCE & OUTCOME:** ***I can share ideas with others to develop ways of estimating the answer to a calculation or problem, work out the actual answer, then check my solution by comparing it with the estimate.*** ***MNU 1-01a***		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	round to the nearest ten, rounding, estimate, greater, smaller, amount nearly, close to, about the same as, closest 10, halfway point, position, guess, how many?, more, less, just over, just under, difference	round to the nearest ten, rounding, midway, halfway point, position, nearly, estimate, estimation, roughly, close to, almost, enough, not enough, amount, too many, too few, check, compare	round to the nearest hundred, rounding, roughly, the same as, closest decade, estimate, estimation, accurate guess, quantity, most, greater, greatest, least, fewer, fewest notice, compare, justify, check the reasonableness of a solution	***Uses correct mathematical vocabulary.***
CPA **Recommended Approaches**	**Experience of using:** **Concrete Materials:** ○ Dienes Materials ○ Rekenrek Frame **Pictorial Approaches:** ○ Number line	**Developing confidence with:** **Concrete Materials:** ○ Dienes Materials ○ Rekenrek Frame **Pictorial Approaches:** ○ Number line ○ Hundred Square	**Developing efficiency using:** **Concrete Materials:** ○ Dienes Materials **Pictorial Approaches:** ○ Number line ○ Hundred Square	
Rounding **Mental agility** **Determine the reasonableness of a solution**	• I can round whole numbers within 20 to the nearest 10. e.g. 3 rounds to 0 8 rounds to 10 5 rounds to 10 12 rounds to 10 19 rounds to 20 15 rounds to 20	• I can round whole numbers to the nearest 10 within 100. e.g. 67 rounds to 70 53 rounds to 50 35 rounds to 40 95 rounds to 100 • I can use rounding skills to check an answer within 100. e.g.23 + 9: (20 +10 =30)	• I can confidently round whole numbers to the nearest 10 and 100 within 1000. e.g. 346 rounds to 350 (nearest 10) and 300 (nearest 100) 750 rounds to 750 (nearest 10) and 800 (nearest 100) • I can use rounding skills to check an answer within 1000. e.g. 312 + 596: (300 +600 =900)	***Rounds whole numbers to the nearest 10 and 100 and uses this routinely to estimate and check the reasonableness of a solution.***

Estimation **Mental agility** **Determine the reasonableness of a solution**	• I can estimate quantities within 20: ○ objects in a row ○ objects in a random pattern ○ objects within a jar/container • I can estimate the position of any number up to 20 on an empty number line.	• I can estimate quantities from 0-100. ○ objects within a jar/container • I can estimate the position of a number between 0-100 on an empty number line. • I can estimate an answer to a calculation within 100.	• I can estimate the position of any number up to 1000 on an empty number line. • I can estimate an answer to a calculation within 1000. • I can compare my estimation with the answer of a calculation to determine the reasonableness of my solution.	***Uses strategies to estimate an answer to a calculation or problem, for example, doubling and rounding.***

CURRICULUM ORGANISER: NUMBER & NUMBER PROCESSES (COUNTING DEVELOPMENT)		**EXPERIENCE & OUTCOME:** ***I have investigated how whole numbers are constructed, can understand the importance of zero within the system and can use my knowledge to explain the link between a digit, its place and its value. MNU 1-02a***		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	number names 0-100, counting forwards/ backwards number sequence, order, ones, twos, tens, number after, number before, number in-between, in the middle, one more, one less, smaller, larger, smallest, biggest, skip counting, pattern, even, odd, first, second, third etc	Number names 0-1000, numeral, digit, ones, 'teens' number, tens, hundreds, thousands, one-two-three digit number, forwards, backwards, larger, smaller, ten more, ten less, decade number, off decade number, skip counting, missing number, number sequence, pattern, order, predict the next number	Number names 0-1000, numeral, digit, hundreds, thousands, multiples, skip counting, position, consecutive numbers, non-consecutive numbers, recognise, identify, multiples, hundred more/less, ordinal numbers, tenth, eleventh, twentieth, thirtieth… twenty-first one	***Uses correct mathematical vocabulary.***
Forwards & Backwards Number Word Sequences (FNWS and BNWS) **Mathematical Vocabulary and Notation** **Mental Agility**	• I can count forward and backwards in 1s starting from any given number within 0-100. e.g 32,33,34,35,36 55,56,57,58,59,60 43,42,41,40,39 92,91,90,89,88 • I can count forward and backward in 10s starting from different decade numbers within 0-100. e.g forwards: 20,30,40,50,60 backwards: 80,70,60,50 • I can count forward and backwards in 2s within 0-20.	• I can count forward and backwards in 1s starting from any given number within 0-1000. e.g 598,599,600,601, 602 903,902,901,900,899,898 • I can count forwards and backwards in 10s beyond 100 starting from different decade numbers within 0-1000. e.g 180,190,200,210,220 720,710,700,690 • I can count forwards and backwards in 10s off the decade within 100.	• I can confidently count forward and backward in 1s starting from any given number within 0-1000. e.g 234,235,236,237,238,239 803,802,801,800,799,798 • I can count in 100s on/off the hundred forwards and backwards within 0-1000. e.g 200,300,400,500,600 900, 800,700,600,500 220, 320, 420, 520 760,660,560,460,360 126, 226, 326, 426	**Counts forwards and backwards in 2s, 5s, 10s and 100s.**

Link mathematical concepts	e.g 0,2,4,6,8,10,12 14,12,10,8,6	e.g 22,32,42,52 97,87,77,67 • I can count forwards and backwards in 2s, 5s, 10s and 3s in the range of 0-100. e.g 2,4,6,8,10,12,14,16,18 24,22,20,18,16,14, 5,10,15,20,25,30,35,40 60,55,50,45,40,35 0,3,6,9,12,15 27,24,21,18,15,12	• I can count forwards and backwards in 10's off the decade beyond 100. e.g 289,299,309,319 607,597,587,577,567 • I can confidently count forwards and backwards in 2s, 5s, 3's and 4's. e.g 0,4,8,12,16,20,24 32,28,24,20,16,12	
Even and Odd Numbers	• I can recognise and identify even and odd numbers within the range 0-30.	• I can recognise and identify even and odd numbers within the range 0-100.	• I can recognise and identify even and odd numbers within the range 0-1000.	

CURRICULUM ORGANISER: NUMBER & NUMBER PROCESSES : (Gaelic) (PLACE VALUE) (ES Webinar) (ES First Level Sketchnote)		**EXPERIENCE & OUTCOME:** ***I have investigated how whole numbers are constructed, can understand the importance of zero within the system and can use my knowledge to explain the link between a digit, its place and its value. MNU 1-02a***		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	place value, numeral, digit, zero, ones, tens, hundreds, one digit number, two digit number, three digit number, smallest, largest, greater than, less than, equal to, partitioning, combining, sequence, order, number after/before/in-between, bar model	numeral, digit, value, place value, ones, tens, hundreds, thousands, three digit number, four digit number, partitioning, represent, combining, regroup, exchange, part part whole model, bar model, sequence, order	place value, value, number, numeral, digit, four digit number, ones, tens, hundreds, thousands, zero, place holder, order, sequence, partitioning, combine, represent, equal to, bar model, part-part whole model	**Uses correct mathematical vocabulary.**
CPA **Recommended Approaches**	**Experience of:** **Concrete Manipulatives:** ○ Ten Frame ○ Rekenrek Frame (10 row) ○ Numicon ○ Cuisenaire Rods ○ Bundling sticks ○ Dienes Materials ○ Arrow Cards ○ Counters/cubes **Pictorial Approaches:** ○ Bar Modelling ○ Cherry diagram	**Developing Confidence with:** **Concrete Manipulatives:** ○ Ten Frames ○ Rekenrek Frame (10 row) ○ Bundling sticks ○ Dienes Materials ○ Arrow Cards ○ Place Value Counters **Pictorial Approaches:** ○ Bar Modelling ○ Cherry diagram	**Developing efficiency with:** **Concrete Manipulatives:** ○ Dienes Materials ○ Place Value Counters ○ Arrow Cards **Pictorial Approaches:** ○ Bar Modelling ○ Cherry diagram	
Number Structures **Interpret questions**	• I can make and/or draw any number within 0-100. • I can partition a number into tens and ones and describe the value	• I can make and/or draw any number within 0-1000. • I am beginning to partition numbers within the range 0-	• I can confidently make and/or draw any number within 0-1000. • I can confidently partition within the range 0-1000.	***Identifies the value of each digit in a whole number with three digits, for example, 867 = 800 + 60 + 7.***

Mental Agility **Use Mathematical Vocabulary and Notation**	of each digit within the range 0-100. e.g 37 = 3 tens, 7 ones 45 – 4 tens, 5 ones *(Canonical form) • I can understand the place of zero. e.g 80- 8 tens, 0 ones or 80 ones	1000 and describe the value of each digit. e.g 234 would be partitioned into 200, 30, and 4 2 hundreds, 3 tens, 4 ones • I understand the importance of zero as a place holder. • I am beginning to understand how numbers can be represented in different ways within 100. e.g 23, can be written as 2 tens and 3 ones. This could also be 1 ten and 13 ones or written as 23 ones (non-canonical form).	and describe the value of each digit. e.g 945 could be partitioned into 900, 40 and 5 9 hundreds, 4 tens and 5 ones. • I understand zero as a place holder in numbers from 0-1000. e.g 306 = 3 hundreds, 0 tens and 6 ones. • I am beginning to understand how numbers can be represented in a different way within 1000. e.g I understand that 126, can be written as 1 hundred, 2 tens and 6 ones. I also understand this could also be written as 12 tens and 6 ones (non-canonical form) or 126 ones. 465 can be 4 hundreds, 6 tens and 5 ones or 46 tens and 5 ones.	***Demonstrates understanding of zero as a placeholder in whole numbers to 1000.***
Numerals	• I can recognise and identify numerals within the range 0-100. • I can read all numbers 0-100.	• I can recognise and identify numerals within the range 0-1000.	• I can confidently recognise and identify numerals within the range 0-1000.	***Reads, writes, orders and recites whole numbers to 1000, starting from any***

Use Mathematical Vocabulary and Notation	• I can write numbers in the range 0-100 in numerals. • I am beginning to write the number names in words from zero to ten.	• I can read all numbers from 0-1000. • I can write number in the range 0-1000 in numerals. • I am developing confidence writing the number names in words from zero to one hundred.	• I can confidently read and write all numbers from 0-1000 in numerals and words. e.g. 294 = two hundred and ninety-four seven hundred and five = 705	***number in the sequence***
Sequencing & Ordering **Use Mathematical Vocabulary and Notation** **Interpret questions**	• I can sequence numbers within 100. e.g smallest to largest: 43,44,45,42,43 = 42,43,44,45 e.g largest to smallest: 67,69,66,68 = 69,68,67,66 • I am beginning to be able to order non-consecutive numbers within 100. e.g smallest to largest: 99,74,85,96 = 74,85,96, 99 largest to smallest: 99,96,85,74 • I can say the number after, before and in-between a given number within the range 0-100.	• I can sequence numbers within 1000. e.g smallest to largest: 143,147,144,146,145 = 143,144,145,146,147 largest to smallest: 225,223,224,222 = 225,224,223,222 • I can order non-consecutive numbers within 1000 (smallest to largest and largest to smallest). e.g smallest to largest 731,703,732,632 = 632,703,731,732 Largest to smallest e.g 492, 443,467,358 = 492,467,443,358 • I can say the number after, before and in-between a given number within the range 0-1000. e.g number after: 143, **144**	• I can confidently sequence numbers within 1000. • I can confidently order non-consecutive numbers within 1000. • I can confidently say the number after, before and in-between a given	

	e.g number after: 34-**35**, number before: 97-**96** number in-between 82 & 84= **83** • I can record the different number combinations when given 2 digits. e.g 2,3 23 or 32	number before: 235, **234** number in-between 234 and 236 = **235** • I can record all the possible digit combinations for 2 or 3 single digit numbers and order them from smallest to largest or largest to smallest. • e.g 4,2,8 = 248,284, 428,482, 824,842	number within the range 0-1000. e.g number after: 459-**460** number before: 678-**677** number in-between: 122 124 =**123** • I can systematically record all the possible digit combinations for 2 and 3 single digit numbers and order them from smallest to largest or largest to smallest.	

CURRICULUM ORGANISER: NUMBER & NUMBER PROCESSES : (Gaelic) (ADDITION & SUBTRACTION) (ES Webinar)(ES First Level Sketchnote)		**EXPERIENCE & OUTCOME:** ***I can use addition, subtraction, multiplication and division when solving problems, making best use of the mental strategies and written skills I have developed. MNU 1-03a***		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary	subitising, doubles, half, halving add, plus, altogether, how much, amount, more than, subtract, take away, minus, less than, difference, value, missing number, equal to, calculation, bigger, smaller, count on/back, screened (hidden), empty number line, bar model, part whole model	2-digit number, 3-digit number, decade number, altogether, more than, less than, doubles, near doubles, half, halving, subtraction, subtract, take away, fewer, find the difference between, equal, partitioning, place value parts, bridging, friendly number, missing number, compensation, multiples, related facts, opposite relationship, inverse	2,3,4-digit numbers, doubling, halving, addition/subtraction calculation, minus, equal to, partitioning, place value parts, bridging through a friendly number, find the difference, related facts, adjusting, compensation, exchanging, regrouping explain, justify strategy/strategies inverse (opposite) relationship	***Uses correct mathematical vocabulary when discussing the four operations including, subtract, add, sum of, total, multiply, product, divide and shared equally.***
CPA **Recommended Approaches**	**Experience of using:** **Concrete Manipulatives:** ○ 10 Frames ○ Rekenrek/Bead strings ○ Cuisenaire Rods ○ Finger Patterns ○ Numicon ○ Cubes/counters **Pictorial Approaches:** ○ Bar Modelling ○ Cherry Diagram	**Develop confidence using:** **Concrete Manipulatives:** ○ 10 Frames ○ Rekenrek (10 row) ○ Bundling Sticks ○ Dienes Materials (Base 10) ○ Place Value Counters **Pictorial Approaches:** ○ Empty Number Line (ENL) ○ Bar Modelling	**Develop efficiency using:** **Concrete Manipulative:** ○ Dienes Materials (base 10) ○ Place Value Counters **Pictorial Approaches:** ○ Empty Number Line (ENL) ○ Bar Modelling	

Mathematical Notation **Reason Algebraically**	• I can recognise and correctly use the (+) and (-) and (=) symbol to record addition and subtraction calculations. • I know that the (=) symbol signifies equivalence. e.g. 4+5 = 9, 9=4+5	• I can use the mathematical symbols of (+), (-) and (=) to solve calculations. • I know that the (=) symbol signifies equivalence. e.g. 8+7 =15, 15 = 8+7	• I can confidently use the mathematical symbols of (+), (-), (=) to solve calculations. • I know that the (=) symbol signifies equivalence. e.g. 57+24 =81, 81= 57+24	
Mental Agility **Reason Algebraically** **Link mathematical concepts**	• I can develop my understanding of the commutative law within 10 (progressing to within 20). • I can use the commutative law to solve an addition calculation in the most efficient way. (e.g. 3 + 12 =, solved as 12+ 3=) e.g 13-5= 8, 14+4=18 42-4= 38, 87+ 5= (count by 1 strategy)	• I can use the commutative law to solve addition calculations in the most efficient way. (e.g. 9+ 65 =, 65+ 9=)	• I can use the commutative law to solve addition calculations in the most efficient way. (e.g. 29+ 364 =, 364 + 29= 393)	***Demonstrates understanding of the commutative law, for example, 6 + 3 = 3 + 6 or 2 × 4 = 4 × 2.***
Use of Mathematical Vocabulary **Mental Agility**	**<u>Subitising:</u>** • I can confidently describe visual patterns within 10. ○ Dot patterns (domino and random) ○ 10 frames: pair wise & five wise pattern ○ Rekenrek/Bead String patterns	**<u>Development of Non-Count by One Strategies within 20:</u>** **<u>Doubling/Halving:</u>** • I can develop my knowledge of **Doubles (6-10)** and halves to add and subtract numbers within 20. e.g 7+7=14, 14-7=7 9+9= 18, 18-9=9	**<u>Development of Non-Count by One Strategies within 1000:</u>** ***Learners should be developing accuracy, flexibility and efficiency with both mental and written strategies.** **<u>Two Digit Numbers:</u>**	***Solves addition and subtraction problems with three-digit whole numbers.*** ***Adds and subtracts multiples of 10 or***

Mental Agility **Interpret Questions** **Select and communicate processes and solutions** **Justify choice of strategy used** **Reason Algebraically** **Link mathematical concepts**	○ Finger patterns (seen/unseen) **<u>Addition Bonds:</u>** • I can develop my knowledge of the different ways to make a number within 10. e.g 8 (4+4, 5+3, 6+2 7+1 etc). **<u>Related Facts:</u>** • I can develop my understanding of related facts within 10 (Inverse relationship). e.g 5+2 =7, 7-2=5, 7-5= 2 **<u>Doubling & Halving:</u>** • I can revise doubling and halving numbers within 10. e.g 4+ 4= 8, 3+3 = 6, $\frac{1}{2}$ of 10 = 5, $\frac{1}{2}$ of 8 = 4 **<u>Count On:</u>** • I can count on in ones to solve an addition calculation with screened collections within 20, then extend 0-100. ○ **First collection screened** ○ **Second collection screened** ○ **Both collections screened**	**<u>Near Doubles:</u>** • I can develop my knowledge of **Near Doubles (plus or minus 1/ 2**) for addtion and subtraction calculations. e.g 8+7=15, 7+7 =14 +1 =15 8+8=16 -1 =15 8+6=14 6+6=12 +2 = 14 8+8=16-2 =14 **<u>Bridging Through a Friendly Number:</u>** • I can develop my knowledge of **Bridging through a friendly number (10) for addition calculations:** e.g 8+7 =15 8+2+ 5 =15 *Use an empty number line to support. • I am developing my knowledge of **Bridging through a friendly number (10) for subtraction calculations:** e.g 13-6=7 (13-3 =10, 10-3=7) *Use an empty number line to support. **<u>Partition into Place Value Parts:</u>**	• I can add two 2-digit numbers together. e.g. 46+37 =83 ○ **Partitioning numbers into their place value parts:** 40+30, 6+7 ○ **Count On:** 46+30+4+3 **<u>Missing Addend:</u>** • I can solve missing addend number calculations. e.g 48+?= 92 • I can subtract a two 2-digit number from a 2-digit number. e.g 92-57 = 35 ○ **Count back (with bridging):** 92 -50-2-5= **<u>Find the Difference:</u>** • I am developing my knowledge of the **find the difference.** strategy. e.g. 84- 68 = Starting on 68 +2+10+4= 16 **<u>Adding Three 2-digit Numbers:</u>** • I can add 3 two-digit numbers e.g 67 + 25 + 74 = **<u>Related Facts:</u>**	***100 to or from any whole number to 1000.*** ***Applies knowledge of inverse operations for addition and subtraction.***

Determine the reasonableness of a solution **Mental Agility** **Interpret Questions** **Select and communicate processes and solutions** **Justify choice of strategy used** **Reason Algebraically** **Link mathematical concepts**	e.g Here are 18 red counters. I am going to cover these counters (screened) Here are 5 yellow counters, I am going to cover these counters (screened). How many altogether? **<u>Missing Addend:</u>** • I can begin to solve missing addend number calculations. e.g 7+? =11 Briefly display, then screen 7 red counters. Ask the learner to look away whilst adding some more yellow counters under the screen. There are now 11 counters. How many were added? (two colours of counters needed) **<u>Count Back:</u>** • I can count back in ones to solve a subtraction calculation from screened collections within 20, then extend 0-100. ○ **<u>Removing Items</u>** e.g Briefly display, then screen 13 counters. Remove 5 counters (without learner	• I am developing my knowledge of **Partitioning numbers into their place value parts** to undertake an addition calculation. e.g 14 + 5 10 + (4+ 5) 10+ 9 = 19 **<u>Compensation/Adjusting:</u>** • I am developing my knowledge of **Compensation for addition and subtraction calculations.** e.g 15-9=6 15-10=5, 5+1 =6 8 + 6=14, (7 +7 taking one from the 8 and adding it to the 6) **<u>Find The Difference:</u>** • I am developing my knowledge of the **find the difference.** strategy. e.g 12-9 = Starting on 9 + 3 = 12 **<u>Related Facts:</u>** • I can develop my understanding of related facts within 20 (Inverse relationship). e.g 7+6 =13, 13-6 =7, 13-7 =6	• I can demonstrate my understanding of related fact for addition and subtraction within 100 (fact families). **<u>Doubling & Halving:</u>** • I can double and half numbers within 100. e.g double 18, 27, 38, 46 half 92= 80 +12 ○ 40 +6 ○ 46 **<u>Three Digit Numbers:</u>** • I can add a single digit to a 3-digit number. ○ **Partitioning numbers into their place value parts** 327 + 6=333 **7 + 6 = 13** 320 + 13 = 333 ○ **Count On (Bridging through a friendly number).** 327 + 6 = 327 + 3 +3 = • I can subtract a single digit from a 3-digit number. ○ **Partitioning into Place Value Parts:** e.g. 715-4= 711 using knowledge that 5-4=1	

Determine the reasonableness of a solution **Mental Agility** **Interpret Questions** **Select and communicate processes and solutions** **Justify choice of strategy used** **Reason Algebraically** **Link mathematical concepts**	observing). Ask the learner how many counters are left? ○ **<u>Missing Subtrahend</u>** e.g Briefly display then screen 11 counters. Remove 4 counters (learner to look away during this). Show remaining counters, how many have been removed? **<u>Find the Difference:</u>** • I am developing my knowledge of the **find the difference** strategy within 10. e.g 7-6 = Starting on 6 + 1 = 7	**<u>Non-Count by One Strategies (0-100):</u>** • I can add from a decade number. e.g 50+4 = 54 • I can subtract to a decade number. e.g 78-8=70 • I can add to a decade number. e.g 23 +? =30 (missing addend) • I can subtract from a decade number. e.g 40 -4=36 • I can add a single digit to a two-digit number with no regrouping. ○ **Partitioning into Place Value Parts.** e.g 34 + 5 30 + (4+ 5) 30+ 9 = 39 • I can subtract a single digit from a two-digit number with no regrouping. ○ **Partitioning into Place Value Parts.** e.g 68-6= 8-6=2	○ **Count Back (Bridging through a friendly number- empty number line).** e.g 715-7= 708 715-5-2= ○ **Compensation:** e.g 715-9= 715-10+1= • I can add and subtract by multiples of a 100. e.g 400+ 300=700 900-200=700 • I can add and subtract multiples of 100 with any 3-digit number. e.g 356+200=556 508-300-208 • I can add a 2-digit number to a 3-digit number with no regrouping required. e.g 314 + 52= 366 ○ **Partitioning into place value parts:** 300+10+4 = 50+2 = 300+60+6=366 ○ **Count on:** 314+50+2= (using an empty number line) • I can add a 2-digit number to a 3-digit number with regrouping e.g 314 +89=	

Determine the reasonableness of a solution **Mental Agility** **Interpret Questions** **Select and communicate processes and solutions** **Justify choice of strategy used** **Reason Algebraically** **Link mathematical concepts**		60+2=62 • I can add through a decade number. e.g 38 + 6= 44 ○ **Partitioning into Place Value Parts:** 30+(8+6) = ○ **Count On (Bridging through a friendly number):** 38+2+4 = • I can subtract through a decade. e.g 43-6 = 37 ○ **Count Back (Bridging through a friendly number):** 43 -3=40 40-3=37 **<u>Two Digit Numbers:</u>** • I can add and subtract multiples of 10 within 100. e.g 40+20=60 90-30=60 • I can add and subtract off the decade in multiples of 10s. e.g 44+ 30= 74 82-20 =62 • I can add two 2-digit numbers together without bridging. e.g 24 +22= 46 ○ **Partition into Place Value Parts:** 20 +20, 4+ 2 = ○ **Count On:** 24 +20 + 2 = (using an empty number line)	○ **Partitioning into place value parts:** 300+10+4= 80+9 = 300+90+13=403 ○ **Count On:** 314 +80 +6+3= 403 (using an empty number line) • I can subtract a 2-digit number from a 3-digit number. ○ **Count Back strategy on an empty number line.** **Example 1 (no bridging):** 476-25=451 476-20-5= **Example 2 (bridging the decade):** 476-28=448 476-20-6-2 = **Example 3 (bridging the decade & hundred)** 476-87= 389 476-70-10-6-1= ○ **Compensation** e.g 454-39= 454-40+1= • I can add a 3-digit number to a 3-digit number with no bridging. e.g 254 + 231 = 485 ○ **Partition into Place Value Parts:**	

Determine the reasonableness of a solution **Mental Agility** **Interpret Questions** **Select and communicate processes and solutions** **Justify choice of strategy used** **Reason Algebraically** **Link mathematical concepts**		• I can subtract a 2d number from a 2d number with no bridging. e.g 49-24= 25 ○ **Partition into Place Value Parts:** 40-20=20 9-4=5 ○ **Count back**: 49–20-4= (use an empty number line) **<u>Find the Difference:</u>** • I am developing my knowledge of the **find the difference.** strategy. e.g 43-38 Starting on 38 + 5 = 43 **<u>Doubling & Halving:</u>** • I can double and half numbers beyond 20 that do not cross the decade or hundred. e.g double 14 = 28 double 22 = 44 half 68 = 34 half of 82 =41 **<u>Adding 3 Single Digits:</u>** • I can add 3 single digit numbers together. e.g 7 + 5 + 9 (non-count by one strategy)	200+200= 400 50+30= 80 4 + 1= 5 ○ **Count On:** 254+200+30+1= (using an empty number line) • I can subtract a 3-digit number from a 3- digit number with no bridging e.g 657-324=333 ○ **Partition into Place Value Parts:** 600-300=300 50-20=30 7-4=3 ○ **Count Back:** 657-300-20-4= (using an empty number line) **<u>3-Digit Number Addition/Subtraction with Bridging:</u>** • I can add a 3-digit number to a 3-digit number with bridging. e.g 489 + 359 = 848 ○ **Partition into Place Value Parts:** 400+300=700 80+50= 130 9+9 = 18 ○ **Count On:** 489+300+50+9=	

Determine the reasonableness of a solution			• I can subtract a 3-digit number from a 3- digit number with bridging. e.g 657-379= 278 ○ **Count Back:** 657-300-70-9= (using an empty number line)	
Interpret Questions **Select and communicate processes and solutions** **Justify choice of strategy used** **Link mathematical concepts**	• I can solve a one-step problem.	• I can confidently solve a one-step problem.	• I can solve two-step problems.	***Solves two step problems.***

CURRICULUM ORGANISER: NUMBER & NUMBER PROCESSES : (Gaelic) (MULTIPLICATION AND DIVISION) (ES Webinar)(ES First Level Sketchnote)		**EXPERIENCE & OUTCOME:** ***I can use addition, subtraction, multiplication and division when solving problems, making best use of the mental strategies and written skills I have developed. MNU 1-03a***		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary	double/doubling, half/halving, skip counting in groups, how many altogether?, total, amount, equal groups, unequal groups, left over fair, not fair, sharing, grouping, divide, multiply, times tables, array pattern, rows, columns, repeated addition	doubling, halving, multiply, multiplication facts, times tables, skip counting, derived facts, repeated addition, arrays, column, row, how many/much altogether? total, sharing, grouping, division, divide, share equally, equal groups, unequal groups, remainders, opposite relationship, fact family	doubling, halving, multiply, multiplication facts, times tables, skip counting, derived facts, repeated addition, sets of, arrays, column, row, total, sharing, grouping, division, division facts, divide, equal groups, unequal groups, remainders, inverse relationship	***Uses correct mathematical vocabulary when discussing the four operations including, subtract, add, sum of, total, multiply, product, divide and shared equally.***
CPA **Recommended Approaches**	**Experience of:** ○ Cubes/Counters ○ Dot Cards ○ 5/10 Frames ○ Cuisenaire Rods ○ Numicon ○ Array Models	**Developing confidence with:** ○ Cubes/Counters ○ Dot Cards ○ Cuisenaire Rods ○ Numicon ○ Maths Flips ○ Array Models	**Developing efficiency with:** ○ Cubes/Counters ○ Dot Cards ○ Cuisenaire Rods ○ Numicon ○ Maths Flips ○ Array Models	
Mathematical Notation	• I am beginning to recognise the multiplication symbol (x). • I am beginning to recognise the division symbol (÷) for sharing and grouping.	• I can recognise and understand the function of the multiplication symbol (x). • I can recognise and understand the function of the division symbol (÷) for sharing and grouping.	• I confidently recognise and understand the function of the multiplication symbol (x). • I confidently recognise and understand the function of the division symbol (÷) for sharing and grouping).	

Mental Agility **Interpret Questions** **Select and communicate processes and solutions** **Justify choice of strategy used** **Link mathematical concepts** **Use mathematical vocabulary and notation**	**Counting Visible Collections:** • I can use concrete manipulatives and pictorial approaches to count in groups of 2s and 10s and make links to the relevant times tables. e.g, 6 (multiplier) groups of 2 (multiplicand) = 12 (product). 4 groups (multiplier) of 10 (multiplicand) = 40 (product). **Repeated Addition:** • I am developing an understanding of multiplication as repeated addition. e.g 7x 2= 14 2+2+2+2+2+2+2 =14 **Arrays:** • I can describe a simple array using the language of rows and columns. e.g 2 rows and 3 columns • I can determine the total number of dots in a simple array. e.g 2 rows, 6 columns = 12 dots	**Counting Visible Collections:** • I can use concrete manipulatives and pictorial approaches to count in groups of 2s,10s, 5s and 3s and make links to the relevant times table. e.g, 4 (multiplier) groups of 5 (multiplicand) =20 (product). **Repeated Addition:** • I am developing an understanding of multiplication as repeated addition. e.g 4 x 5= 20 5 +5 +5 +5=20 **Arrays:** • I can describe an array using the language of rows and columns. e.g 5 rows and 8 columns • I can determine the total number of dots in a simple array. e.g 3 rows, 7 columns = 21 dots	**Counting Visible Collections:** • I am developing fluency with counting in groups of 2s,5s, 10s, 3s and 4s using a range of concrete manipulatives and make links to the relevant times tables. e.g 3 (multiplier) groups of 4 (multiplicand) =12 (product). **Repeated Addition:** • I am developing an understanding of multiplication as repeated addition. e.g 8 x 4= 32 4+4+4+4+4+4+4+4=32 **Arrays:** • I can describe an array using the language of rows and columns. e.g 4 rows and 6 columns • I can determine the total number of dots in a simple array. e.g 7 rows, 4 columns = 28 dots	***Applies strategies to determine multiplication facts, for example, repeated addition, grouping, arrays and multiplication facts.*** ***Demonstrates understanding of the commutative law, for example, 6 + 3 = 3 + 6 or 2 × 4 = 4 × 2.***

Mental agility **Interpret questions** **Select and communicate processes and solutions** **Justify choice of strategy used** **Link mathematical concepts**		• I can build an array with a set number of rows and columns and record the written multiplication calculation/sentence. **<u>Commutative Law:</u>** • I know that when I multiply two numbers together, the order in which I multiply them doesn't change the total. e.g 2x3=6, 3x2=6 *This can be demonstrated using pictorial representations and concrete resources. **<u>Times Table Fluency:</u>** • I am building my knowledge and understanding of the multiplication facts for the 2, 5, 10 and 3 times tables using skip counting and derived facts (see below). ○ **Doubling:** 2x5=10 so 4x5=20 ○ **Add a group:** 5x5=25 so 6 x6= 25+5 ○ **Subtract a group:** 10 x3=30, so 9x3=27 ***Consistently revisited throughout the whole year.**	• I can build an array with a set number of rows and columns and record the written multiplication calculation/sentence. **<u>Commutative Law:</u>** • I know that when I multiply two numbers together, the order in which I multiply them doesn't change the total. e.g 4 x 5=20, 5x4=20 *This can be demonstrated using pictorial representations and concrete resources. **<u>Times Table Fluency:</u>** • I am building my knowledge and understanding of the multiplication facts for the 2, 5, 10, 3 and 4 times tables using skip counting and derived facts (see below). ○ **Doubling:** 3x4=12 so 6x4=24 ○ **Add a group:** 5x4=20 so 6x4=24 ○ **Subtract a group:** 10x4=40 so 9x4=36 ○ **Halving:** 10x4=40 so 5x4=20 ***Consistently revisited throughout the whole year.**	

Sharing & Grouping **Use mathematical vocabulary and notation** **Mental agility** **Interpret questions** **Link mathematical concepts** **Reason algebraically** **Determine the reasonableness of a solution**	**Sharing:** • Using concrete manipulatives, I can share items into smaller equal groups. • e.g Share 12 counters between 2 people? **Grouping:** • I can determine the number of equal groups. e.g Here are 10 eggs and here are some baskets. Each basket gets 2 eggs, how many baskets do you need?	**Sharing:** • Using concrete manipulatives, I can share items into smaller equal groups. e.g 35 divided by 5 equals 7 **Grouping:** • I can determine the number of equal groups. e.g Here are 20 strawberries. They need to be packed in boxes of 4. How many boxes will I need? **Multiplication/Division Fluency:** • When given a multiplication sentence (represented with concrete/pictorial approaches), I can derive the two division facts (sharing and grouping) demonstrating my understanding of the inverse relationship. e.g 5 x 2 = 10, 10 ÷ 5 = 2, 10 ÷ 2 = 5 • When given a division sentence (represented with concrete/pictorial	**Sharing:** • Using concrete manipulatives, I can share items into smaller equal groups. e.g 20 divided by 4 equals 5 **Grouping:** • I can determine the number of equal groups. e.g You have 36 pencils. You need to put them in pots of 4 pencils. How many pots will you need? **Multiplication/Division Fluency:** • When given a multiplication sentence (represented with concrete/pictorial approaches), I can derive the two division facts (sharing and grouping) demonstrating my understanding of the inverse relationship. e.g 4x5=20, 20 ÷4=5,20÷5=4 • When given a division sentence (represented with concrete/pictorial approaches), I can derive the associated multiplication fact.	***Applies strategies to determine division facts, for example, repeated subtraction, equal groups, sharing equally, arrays and multiplication facts.*** ***Applies knowledge of inverse operations (multiplication and division).***

		approaches), I can derive the associated multiplication fact. e.g 15÷3=5 (represented by grouping) 5x3=15	e.g 32÷4=8 (represented by grouping) 8x4=32	
Mental Agility **Interpret questions**	• Not started in this phase.	• I can solve a range of multiplication and division calculations using concrete materials e.g 80 ÷ 2 = 40 (Sharing) 4 x 20 = 80	• I can solve a range of multiplication and division calculations using concrete materials. e.g 600 ÷ 3 = 200 (Sharing) 2 x 400 = 800	**Uses multiplication and division facts to solve problems within the number range 0 to 1000.**
Mental Agility **Interpret questions** **Select and communicate processes and solutions** **Justify choice of strategy used**	• Not started in this phase.	• Not started in this phase.	• I can multiply a single digit by 10. e.g 7x10 =70 • I can multiply a single digit by 100. e.g 4 x100= 400 • I can multiply a 2-digit number by 10. e.g 45 x10= 450 • I can divide a multiple of 10 by 10. e.g 80 ÷ 10 =8 • I can divide a multiple of 100 by 10 and 100. e.g 700 ÷10=70 700÷100 =7	**Multiplies and divides whole numbers by 10 and 100 (whole number answers only).**

Determine the reasonableness of a solution			• I can divide a 3-digit number off the hundred by 10. e.g 450÷10=45	
Use mathematical vocabulary and notation **Interpret questions**	• With support, I can solve a one-step multiplication problem using concrete materials (e.g counters) ○ Equal groups ○ Arrays • With support, I can solve a one-step division problem using concrete materials (e.g counters) ○ Sharing ○ Grouping	• I can solve one-step multiplication problem using concrete materials (e.g counters) ○ Equal groups ○ Arrays • I can solve a one-step division problem using concrete materials (e.g counters) ○ Sharing ○ Grouping	• I can solve one-step multiplication problem using concrete materials (e.g counters) ○ Equal groups ○ Arrays • I can solve a one-step division problem using concrete materials (e.g counters) ○ Sharing ○ Grouping • I can solve a two-step problem that involves multiplication and division.	**Solves two step problems.**

CURRICULUM ORGANISER: FRACTIONS: (Gaelic) (ES Webinar Pt1) (ES Webinar Pt2) (ES Webinar Pt3)		**EXPERIENCES & OUTCOMES:** ***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; and where simple fractions lie on the number line. MNU 1-07a*** ***Through exploring how groups of items can be shared equally, I can find a fraction of an amount by applying my knowledge of division. MNU 1-07b*** Through taking part in practical activities including use of pictorial representations, I can demonstrate my understanding of simple fractions which are equivalent. MTH 1-07c		
Core Aspect & Skills Focus	Phase 1	Phase 2	Phase 3	**Benchmarks**
Mathematical Vocabulary and Notation	fraction, whole, half, halves, two equal parts, quarter/s, 4 equal parts, sharing, splitting, groups, larger, smaller, more, less, halfway	fraction, whole, half, quarter/s, eighth/s, 8 equal parts, equal, sharing, dividing, denominator, numerator, size of equal parts, number of parts, fraction wall, number line, bar model,	fraction, thirds, tenths, fifths, numerator, denominator, equal parts, number of parts, groups, equivalence, equivalent	**Uses correct mathematical vocabulary.**
CPA **Recommended Approaches**	**Experience of:** ○ Cuisenaire Rods (linear model) ○ Double sided counters (set model) ○ Partitioned and unpartitioned shapes (area model) ○ Everyday objects/outdoor materials	**Developing confidence with:** ○ Cuisenaire Rods (linear model) ○ Double sided counters (set model) ○ Partitioned and unpartitioned shapes (area model) ○ Paper strips ○ Everyday objects/outdoor materials	**Developing efficiency with:** ○ Cuisenaire Rods (linear model) ○ Numicon (area model) ○ Double sided counters (set model) ○ Partitioned and unpartitioned shapes (area model) ○ Paper strips ○ Everyday objects/outdoor materials	

Use mathematical vocabulary and notation **Interpret questions** **Select and communicate processes and solutions** **Justify choice of strategy used** **Link mathematical concepts**	• I can confidently understand and demonstrate the meaning of the word whole (set model & area model). • I can confidently split a whole object/s into halves (set model & area model). • I can split a whole object/s into quarters. I understand that this is 4 equal parts (area model & set model). • Using a range of partitioned and unpartitioned shapes, I can show my understanding of a half and quarter (Area Model). • I can count in halves.	• I can confidently understand and demonstrate the meaning of the word whole (set model & area model). • I can confidently split a whole object/s into quarters (set model & area model). • I can split a whole object/s into eighths. I understand that this is 8 equal parts (area model & set model) • Using a range of partitioned and unpartitioned shapes, I can show my understanding of an eighth (Area Model). • I can count in halves, quarters and eighths.	• I can confidently understand and demonstrate the meaning of the word whole (set model & area model). • I can split a whole object/s into fifths, tenths and thirds (area model & set model). • Using a range of partitioned and unpartitioned shapes, I can show my understanding of fifths, tenths and thirds (Area Model). • I can count in thirds, fifths and tenths.	***Explains what a fraction is using concrete materials, pictorial representations and appropriate mathematical vocabulary.***

Use mathematical vocabulary and notation **Link mathematical concepts**	• I am beginning to understand that the larger the denominator the smaller the size of each equal part within a whole (area model). e.g I know that a $\frac{1}{2}$ is larger than a $\frac{1}{4}$.	• I understand that the larger the denominator the smaller the size of each equal part within a whole (area model). e.g I know that an $\frac{1}{8}$ is smaller than a $\frac{1}{4}$. • I can explain the role of the denominator. • I can explain the role of the numerator.	• I confidently understand that the larger the denominator the smaller the size of each equal part within a whole (area model). • I can confidently explain the role of the denominator. • I can confidently explain the role of the numerator.	***Demonstrates understanding that the greater the number of equal parts, the smaller the size of each share.*** ***Explains the role of the numerator and denominator.***
Use mathematical vocabulary and notation **Interpret questions** **Link mathematical concepts**	• I can recognise, read and write the correct fraction notation for halves and quarters. • I can match the fraction notation of halves and quarters to the corresponding concrete or pictorial representation. • I can recognise, read and write the word half.	• I can recognise, read and write the correct fraction notation for halves, quarters and eighths. • I can match the fraction notation of halves, quarters and eighths to the corresponding concrete or pictorial representation and vocabulary. • I can recognise, read and write the words half, whole and quarter/s.	• I can recognise, read and write the correct fraction notation for thirds, fifths, and tenths. • I can match the fraction notation of fifths, tenths and thirds to the corresponding concrete or pictorial representation and vocabulary. • I can recognise, read and write the words third/s, fifth/s and tenth/s.	***Uses the correct notation for common fractions to tenths, for example,*** $\frac{1}{2}$ ***,*** $\frac{2}{3}$ ***and*** $\frac{5}{8}$***.***
Use mathematical vocabulary and notation	• I can label the halfway point on a line with or without any increments (linear model).	• I can label quarters and eighths on a number line. e.g use practical materials including a paper strip, string or a number line.	• I can label fifths, tenths and thirds on a line with increments.	***Compares the size of fractions and places simple fractions in order on a number line.***

Interpret questions **Select and communicate processes and solutions**	• e.g use practical materials including a paper strip, string or a number line.		e.g use practical materials including a paper strip, string or a number line. • I can compare the size of fractions by using a number line or bar model to scaffold my thinking.	
Mental agility **Interpret questions** **Select and communicate processes and solutions** **Justify choice of strategy used**	• I can half any even number within 10.	• I can half any even number within 20. • I can quarter numbers using the strategy of half and half again. e.g A quarter of 16 is 4. A quarter of 24 is 6.	• I can use my knowledge of division and support of concrete manipulatives to half or quarter numbers. e.g A half of 24 is 12. A quarter of 40 is 10. • I can use my knowledge of division and support of concrete manipulatives to find a third, fifth or tenth of a number. e.g A third of 21 is 7. A fifth of 35 is 7. A tenth of 80 is 10.	***Uses known multiplication and division facts and other strategies to find unit fractions of whole numbers, for example, 1/2 or 1/4***

Use mathematical vocabulary and notation **Interpret questions** **Link mathematical concepts** **Reason algebraically**	• Not started in this phase.	• I can identify the relationship between a whole, a half and a quarter using concrete and pictorial approaches.	• I can identify the relationship between halves, quarters and eighths using concrete and pictorial approaches.	Uses pictorial representations and other models to demonstrate understanding of simple equivalent fractions.

CURRICULUM ORGANISER: MONEY: (Gaelic) (ES Webinar Pt1)(ES Webinar Pt2)		**EXPERIENCES & OUTCOMES:** ***I can use money to pay for items and can work out how much change I should receive. MNU 1-09a*** ***I have investigated how different combinations of coins and notes can be used to pay for goods or be given in change. MNU1.09b***		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	money, coin/s, notes, cash, bank card, pence, penny, pound, pound sign (£), pence sign (p), price, costs more, double, half, costs less, cheaper, more, less, the same as, buy, pay, sell, spend, amount, total, how much altogether?, change	money, coins, cash, notes, pound sign (£), pence sign (p), bank card, pounds, pence, decimal point, total cost/ spend, spending, amount, change, bought, sold, purchase, paying, paid, saving, bank account	money, notes, cash, pound sign (£), pence sign (p), decimal point, value, worth, total amount, more/most expensive, less/least, expensive debit card, credit card, cheque banking, savings, payment, face ID, pin number, banking apps, contactless payments, compare, spent	***Uses correct mathematical vocabulary.***
Use mathematical vocabulary and notation **Mental agility** **Select and communicate processes and solutions**	• I can identify, name and order all coins and notes up to £10. • I can explore the different ways to make the same total up to 20p. e.g 16p=10p + 5p+ 1p 16p= 5p + 5p + 5p + 1p 16p = 2p (x8)	• I can identify, name and order all coins and notes up to £20. • I can explore the different ways to make the same total up to £1. e.g 88p = 50p + 20p +10p + 5p +2p +1p or 88p = 20p +20p +20p+ 20p + 5p + 1p+ 1p + 1p	• I can confidently identify, name and order all coins and notes up to £20. • I can explore different ways to make the same total up to £20. • I can consider the most efficient way to make a total using the least number of coins/notes. e.g £16.25 = £10 + £5 + £1 +20p +5p (most efficient) £16.25 = £ 16 x 1 pound coins + 5p x 5 (less efficient)	***Identifies and uses all coins and notes to £20 and explores different ways of making the same total.***

Use mathematical vocabulary and notation **Mental agility**	• I know that 100p= £1 • I know that 10p x10 = £1	• Building on my knowledge that 100p =£1, I know that: 300p =£3 500p = £5 Half of £1 = 50p • I know money combinations that equal £1. e.g. 50p x 2 = £1 20p x 5 = £1 50p +20p+ 20p + 10p = £1	• I can convert amounts of money between pounds and pence and vice versa. e.g. £1 x 10 = £10 (1000p) Half of £1 = 50p Half of £7 = £3.50 (£6 divided by 2 = £3, £1 divided by 2 = 50p) £2.57 = 257p £0.43 = 43p 56p =£0.56, 134p = £1.34 £2.07 = £2 and 7p	***Records amounts accurately in different ways using the correct notation, for example, 149p = £1·49 and 7p = £0·07.***
Use mathematical vocabulary and notation **Interpret questions** **Mental agility** **Select and communicate processes and solutions** **Justify choice of strategy used**	**Counting Totals:** • Given a set number of coins, I can count the total (within 20p). e.g. 10p + 2p +5p + 1p = 18p **Paying for an Item/s:** • I can use a combination of coins to pay for an item within 20p. A sticker costs: 15p (10p +5p coins) • I can add the cost of two items together to find the total within 20p. e.g 8p +7p = 15p	**Counting Totals:** • Given a set number of coins, I can count the total (within £1). e.g. 20p + 10p +5p + 2p + 2p = 39p **Paying for an Item/s:** • I can use a combination of coins to pay for an item or items within £1. • I can add the cost of two 2-digit numbers together without bridging. e.g 24p + 32p = 56p 61p + 35p = 96p	**Counting Totals:** • Given a set number of coins and notes, I can count the total (within £10). e.g. £5, £2, £1, 50p, 20, 2p = £8.72 or 872p **Paying for an Item/s:** • I can use a combination of coins and notes to pay for an item or items within £10. • I can add the price of two items together and calculate the total. e.g £2.56 (256p) + £3.24 (324p) = £5.80 (580p)	***Uses a variety of coin and note combinations, to pay for items and give change within £10.*** ***Applies mental agility number skills to calculate the total spent in a shopping situation and is able to calculate change.***

Determine the reasonableness of a solution	**<u>Calculating Change:</u>** • I can calculate change within 20p.	• I can add the cost of three items to find the total within 20p. e.g 8p +7p + 4p = 19p **<u>Calculating Change:</u>** • I can calculate change from £1 using a missing addend calculation on a number line.	• I can add the cost of three items to find the total within £1. e.g 23p+ 50p+ 15p= 88p **<u>Calculating Change:</u>** • I can calculate change from £1, £2, £5 and £10.	
	• I understand that items can be paid for using cash or a bank card.	• I know that items can be paid for using a contactless bank card, apple pay (phones) and cash.	• I understand that people use security measures to protect their banking (e.g pin number, face ID, banking apps) and can pay using a variety of methods.	***Demonstrates awareness of how goods can be paid for using cards and digital technology.***

CURRICULUM ORGANISER: TIME: (Gaelic) (ES Webinar Pt1)(ES Webinar Pt3)		**EXPERIENCES & OUTCOMES:** ***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*** ***I can use a calendar to plan and be organised for key events for myself and my class throughout the year MNU 1.10b*** ***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***		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	time, day, week, weekend, month, year, night, morning, afternoon, evening, breakfast, lunch/dinner, bedtime, birthday, holiday, today, yesterday, tomorrow, next, after, before, early, late, shorter, longer, older/oldest, new/er/est, fast, faster, fastest, days of the week, seasons, months of the year, date, calendar clock, watch, digital watch, hands, hour, minutes, seconds, o'clock, half past	midnight, midday, noon, fortnight, days, hours, minutes, seconds, digital/analogue clock, am/pm, quarter to/past, earliest, latest, months of the year, calendar, timetable, timer, stopwatch, how long will it take to? often? how long ago? always, never, often, sometimes, usually	analogue/digital clock, 12-hour, 24-hour clock, am/pm, quarter to/past, five minute intervals, 1st earliest, latest, timetable, digital calendar, decade, century, , 2nd, 3rd etc,	***Uses correct mathematical vocabulary.***
Use mathematical vocabulary and notation **Interpret questions**	• I can confidently read o'clock and half past times on an analogue clock using my understanding of the minute and hour hand. • I can convert and record o'clock and half past between analogue and digital 12-hour clocks	• I can confidently read o'clock, half past and quarter past times on an analogue clock using my understanding of the minute and hour hand. • I can convert and record o'clock, half past and quarter past times between an	• I can confidently read o'clock, half past, quarter past and quarter to times on an analogue clock using my understanding of the minute and hour hand. • I can convert and record o'clock, half past, quarter past	***Tells the time using half past, quarter past and quarter to using analogue and digital 12-hour clocks.*** ***Records 12-hour times using am***

	(including the written words).	analogue and digital 12-hour clock (including the written words). • I understand that am is before midday and pm is after mid-day.	and quarter to times between an analogue and digital 12-hour clock (including the written words). • I can confidently use the notation am and pm when recording both analogue and digital time. • I am developing an initial knowledge and awareness of the 24-hour clock and can give examples of where I would see this in every-day life. e.g. mobile phone, iPad, TV	***and pm and is able to identify 24- hour notation, for example, on a mobile phone or computer.***
Use mathematical vocabulary and notation	• I can record the short date in numerals. e.g 02.10.24 or 02/10/24	• I can record the short and long date using numerals and words. e.g Wednesday 2 June 2024 02.06.24 or 02/06/24	• I can confidently record the short and long date using numerals and words. e.g Tuesday 21st June 2024 21.06.24 or 21/06/24	***Records the date in a variety of ways, using words and numbers.***
Use mathematical Vocabulary and Notation **Mental agility**	• I know there are 60 minutes in an hour. • I know there are 30 minutes in half an hour. • I know that there are 7 days in a week.	• I know there are 24 hours in a day. • I know that 60 seconds in a minute. • I know that one quarter of an hour = 15minutes	• I know that three quarters of an hour = 45 minutes • I know the number of days in each month. • I know the number of days in a year, including a leap year.	***Knows the number of seconds in a minute, minutes in an hour, hours in a day, days in each month, weeks and days in a year.***

Link mathematical concepts	• I know that there are 12 months in the year.		• I know the number of weeks in a year. • I know that a decade = 10 years.	
Use mathematical vocabulary and notation	• I can confidently say which day of the week comes before or after another. e.g What day is before Tuesday? Monday • I can confidently order the seasons of the year. • I can confidently name all the months of the year.	• I can accurately name the months of the year in order.	• I can accurately relate the month of the year to the season. • I know the ordinal position of each month in the sequence. e.g January is the first month, June is the sixth month	***Orders the months of the year and relates these to the appropriate seasons.***
Use mathematical vocabulary and notation **Interpret questions**	• I can follow a daily calendar with the class visual timetable. • I can use a yearly calendar to find class birthdays.	• I can use a range of visual calendars: ○ yearly calendars showing birthdays ○ a monthly calendar showing the number of days ○ a daily calendar with the class visual timetable	• I can read and interpret a variety of calendars, including digital calendars. • I can add events (e.g birthdays) into a yearly calendar. • I can count the number of days & weeks until an event happens. • I can interpret and read a 12-hour timetable, identifying key pieces of information about events and times.	***Uses and interprets a variety of calendars and 12-hour timetables to plan key events.***

			e.g swimming lesson starts at 4.15pm.	
Determine the reasonableness of a solution	• I can use a range of timers to calculate how long a task/activity will take. e.g sand timer, digital timer, iPad timer • Through a wide range of experiences using timers, I am beginning to be able to estimate how long an activity will take to complete in seconds. e.g a marble run	• I can estimate how long a task will take to complete in seconds or minutes. • I can use a range of timers to calculate how long a task/activity will take. e.g sand timer, iPad timer or stopwatch	• I can estimate how long a range of tasks/activities will take in seconds, minutes & hours using a range of timers to record the outcome. • I can use a range of timers to calculate how long a task/activity will take. e.g using a sand timer, iPad or stopwatch	***Selects and uses appropriate timers for specific purposes.***

CURRICULUM ORGANISER: MEASUREMENT		**EXPERIENCES & OUTCOMES:** ***I can estimate how long or heavy an object is, or what amount it holds, using everyday things as a guide, then measure or weigh it using appropriate instruments and units. MNU 1-11a*** ***I can estimate the area of a shape by counting squares or other methods. MNU 1-11b***		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	measure, measurement, estimate, size, length, height, width, depth mass, weight, weigh, capacity, volume, full, half, high, low, wide, narrow, deep, shallow thick, thin long/er short/er, tall/er, light/er, full/er, empty/ overflowing, more than, less than, close to, nearly over, under, almost, about the same as, holds, container, centimetres (cm), metres (m), litres (L), kilograms (Kg), grams (g) measuring tools, ruler, tape measure, height chart, scales, balance, measuring jugs/cups/spoons	measure, measurement, estimation, compare, enough, not enough metres, (m), centimetres, (cm), grams, (g), kilograms, (Kg), litres, (L), millilitres (ml), units of measure, weight, capacity, measuring equipment/ instruments, metre stick, ruler, scales, pan balance, digital scales, measuring jug, measuring cups, less full, three quarters full, least full heavier, narrow/er, wide/er	measure, measurement, estimation, compare, units of measure, equipment, instruments, metric, standard units, millimetres, (mm), convert, conversions, comparison, dial scales, measuring cylinder, area, thinner/est, thicker/est, narrow/er/est, widest, longest, tallest, heaviest, lightest, fullest, emptiest.	**Uses correct mathematical vocabulary.**
Use mathematical vocabulary & notation **Mental agility**	• Not started in this phase.	• I know that 100cm = 1m • I know that $\frac{1}{2}$ m = 50cm • I know that 1 Kg = 1000g • I know that $\frac{1}{2}$ Kg = 500g • I know that 1 L = 1000ml • I know that $\frac{1}{2}$ L = 500ml	• I know that 10mm = 1cm • I know that $\frac{1}{4}$ m = 25cm • I know that $\frac{1}{4}$ Kg = 250g • I know that $\frac{1}{4}$ L = 250 ml • I can convert between metres and centimetres. e.g 105cm = 1m 5cm 2m 85cm = 285cm	***Uses knowledge of relationships between units of measure to make simple conversions, for example, 1 m 58 cm = 158 cm.***

Use mathematical vocabulary notation **Determine the reasonableness of a solution**	• I can estimate the length of everyday objects in centimetres. • I can estimate the height of everyday objects in centimetres.	• I can estimate the length and height of everyday objects in centimetres and metres. • I can estimate the mass of everyday objects in grams and kilograms. • I can estimate the capacity of everyday objects in litres and millilitres.	• I can estimate the length and height of everyday objects in metres, centimetres and millimetres. • I can estimate the mass of everyday objects in grams and kilograms. • I can estimate the capacity of everyday objects in litres and millilitres.	***Uses knowledge of everyday objects to provide reasonable estimates of length, height, mass and capacity.***
Use mathematical vocabulary and notation **Interpret questions** **Select and communicate processes and solutions** **Justify choice of strategy used**	**<u>Measuring Length & Height</u>**: • I can measure the length or height of objects in centimetres (up to 30cm) using a ruler, tape measure, height chart or non-standard units (e.g hand span, cubes, books). **<u>Measuring Mass:</u>** • I can measure the mass of everyday objects in kilograms using a pan balance, dial scales, digital scales or non-standard units (e.g cubes, blocks, Lego) **<u>Measuring Capacity:</u>** • I can measure the capacity of everyday objects in litres	**<u>Measuring Length & Height</u>**: • I can measure the length or height of objects/spaces in metres (m) or centimetres (cm) using a ruler, tape measure or metre stick. **<u>Measuring Mass:</u>** • I can measure the mass of everyday objects in grams and kilograms using a pan balance, dial scales or digital scales. **<u>Measuring Capacity:</u>** • I can measure the capacity of everyday objects in litres or millilitres to the nearest $\frac{1}{2}$ litre	**<u>Measuring Length & Height</u>**: • I can measure the length or height of objects in metres, centimetres and millimetres using a ruler, tape measure or metre stick or trundle wheel. **<u>Measuring Mass:</u>** • I can measure the mass of everyday objects in grams and kilograms using digital scales, or dial scales. **<u>Measuring Capacity:</u>** • I can measure the capacity of everyday objects in litres and millilitres using a measuring jug, measuring cup/spoon or measuring cylinder.	***Makes accurate use of a range of instruments including rulers, metre sticks, digital scales and measuring jugs when measuring lengths, heights, mass and capacities using the most appropriate instrument for the task.*** ***Records measurements of length, height, mass***

	using a measuring jug and/or measuring cup/spoon. **<u>Recording Measurements:</u>** • I can record measurements using the appropriate standard units (cms).	using a measuring jug and/or measuring cup/spoon. **<u>Recording Measurements:</u>** • I can record measurements using the appropriate standard units. • I am beginning to develop an understanding of which measuring tool is the most appropriate for a given task.	**<u>Recording Measurements:</u>** • I can record measurements using the appropriate standard units. • I can confidently decide on which measuring tool is the most appropriate for a given task.	***and capacity to the nearest standard unit, for example, millimetres (mm), centimetres (cm), grams (g), kilograms (kg), millilitres (ml), litres (l)***
Use mathematical vocabulary and notation **Determine the reasonableness of a solution**	• I can compare an estimate to the actual measurement using comparative language (shorter, longer, taller).	• I can compare an estimate to the actual measurement using comparative language (lighter, heavier, fuller, less full).	• I can compare an estimate to the actual measurement using comparative language (shorter, longer, taller, lighter, heavier, fuller, less full). • I can compare an estimate to the actual measurement using numerical values. e.g estimate 32cm actual: 36cm difference = 4cm	***Compares measures with estimates***
Use mathematical vocabulary and notation	• I can read a ruler or tape measure scale up to 30cm.	• I can read a ruler, tape measure or metre stick scale.	• I can read a ruler, metre stick or height chart scale.	***Reads a variety of scales on measuring devices including those with simple***

Interpret Questions **Determine the reasonableness of a solution**		• I can read dial scales to measure the mass of an object to the nearest $\frac{1}{2}$ kilogram. • I can read the scale on a measuring jug to the nearest $\frac{1}{2}$ litre to measure the capacity of different objects.	• I can read dial scales to measure the mass of an object in grams and kilograms. • I can confidently read scales on measuring jugs or measuring cylinder to accurately identify the capacity. • I can identify non labelled increments on scales. e.g dial scales and measuring jugs	***fractions, for example, $\frac{1}{2}$ litre.***
Use mathematical vocabulary and notation **Interpret Questions**	• I am beginning to understand the concept of area through a range of practical activities. • I can use a range of non-standard units (post its, books, cubes) of measurement to determine an area (e.g shape, space, object).	• I can estimate and calculate the area of simple 2D shapes through counting the squares.	• I can estimate and calculate the area of simple 2D shapes through counting the squares. (to the nearest half square)	***Uses square grids to estimate then measure the areas of a variety of simple 2D shapes to the nearest half square.***

Interpret Questions	• Not started in this phase	• Not started in this phase.	• I can use 1cm squared paper to draw a range of simple 2D shapes when given a specific area. e.g draw a square with an area of 16 squares.	***Creates shapes with a given area to the nearest half square using square tiles or grids.***
Interpret Questions	• Not started in this phase.	• Not started in this phase	• I can compare simple 2D rectangles and identify which have the same area through counting squares.	***Recognises that different shapes can have the same area (conservation of area)***

CURRICULUM ORGANISER: MATHEMATICS – ITS IMPACT ON THE WORLD PAST, PRESENT AND FUTURE		**EXPERIENCE & OUTCOME:** I have discussed the important part that numbers play in the world and explored a variety of systems that have been used by civilisations throughout history to record numbers. MTH 1-12a		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	mathematics, numeracy, numbers shopping, money, telling the time, baking/cooking, measuring	numeracy, mathematics, shopping, money, time, baking/cooking, measuring, number systems (Roman numerals), inventions, STEM	numeracy, mathematics, daily life, jobs, career/s, creativity, number systems, inventions, STEM	**Uses correct mathematical vocabulary**
	• I understand that numbers are important in everyday life. e.g. shopping, telling the time, cooking/baking	• I understand that numeracy is important for everyday life. e.g. shopping, telling the time, cooking/baking	• I am developing my understanding that numeracy is important for everyday life and for most jobs/careers. • I can investigate and give examples of how people might use numeracy and maths in their job/role.	Investigates and shares understanding of the importance of numbers in learning, life and work.
	• Not started in this phase.	• I am beginning to have an understanding of number systems used throughout history (around the world). e.g. Roman numerals (link with IDL focus)	• I am developing my understanding of number systems used throughout history (around the world). e.g. Roman numerals, Egyptian numerals, tally marks or lunar cycles (link with IDL focus)	Investigates and shares understanding of a variety of number systems used throughout history.

CURRICULUM ORGANISER: PATTERNS & RELATIONSHIPS		**EXPERIENCES & OUTCOMES:** I can continue and devise more involved repeating patterns or designs, using a variety of media. MTH 1-13a Through exploring number patterns, I can recognise and continue simple number sequences and can explain the rule I have applied. MTH 1-13b		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	pattern, repeating pattern, sequence, size, colour, shape, bigger, larger, smaller, symmetrical, match forwards, backwards, repeating, the same again, number patterns **'What do you notice?'**	pattern, repeating pattern, design, sequence, rule/s, repeat, **'What do you notice?'**	Pattern, repeating pattern, design, rule, sequence, increasing, decreasing, multiples **'What do you notice?'**	
Mental agility	• I can count forward and backward in 2s and 10s within 0-100. forwards:0,2,4,6,8,10,12 backwards: 14,12,10,8,6 forwards: 20,30,40,50,60 backwards: 80,70,60,50	• I can count forwards and backwards in 2s and 5s within 100. e.g 1,3,5,7,9,11 5,10,15,20,25,30,35,40 60,55,50,45,40,35 • I can count forwards and backwards in 10s beyond 100 starting from different decade numbers. e.g 180,190,200,210,220 720,710,700,690	• I can count forwards and backwards in 2s, 5s, 10's and 100s within 1000 starting from any given number. e.g 110,112,114,116.... 91,93,95,97.... 265,270,275,280.... 62,67,72,77,82,87..... 468,478,488,498.... 21,121,221,321,421...	Counts forwards and backwards in 2s, 5s and 10s from any whole number up to 1000. **(*See Counting Development Organiser)**

	• I can recognise and describe a number pattern using my understanding of counting in 1s, 10s or 2s. ***The use of a hundred square and choral counting is encouraged to explore patterns.**	• I can recognise and describe a number pattern using my understanding of counting in 1s, 10s, 2s or 5s. ***The use of a hundred square and choral counting is encouraged to explore patterns.**	• I can recognise and describe a number pattern using my understanding of counting in 1s, 10s, 2s, 5s, 100s. ***The use of a hundred square and choral counting is encouraged to explore patterns.**	Describes patterns in number, for example, in the multiplication tables and hundred square.
	• I can continue a repeating visual pattern by identifying the recurring colours and shapes. • I can create or draw simple repeating visual patterns using concrete materials with different colours or shapes.	• I can continue a repeating pattern by identifying recurring colours, shapes or symbols. • I can confidently create or draw repeating visual patterns using concrete materials with different colours, shapes or symbols.	• I can confidently continue and create a repeating pattern with concrete materials or drawing.	Continues and creates repeating patterns involving shapes, pictures and symbols.
Mental agility	• I can describe and continue a number pattern by noticing the rule. e.g forwards in 2s: 4,6,8.... backwards in 10s: 50, 40 • I can create a number pattern using concrete materials or numerals. e.g use outdoor materials, Cuisenaire Rods, cubes, coloured shapes etc.	• I can describe and continue a number pattern using my knowledge of the rule. e.g 7,12,17,23.... (add 5) 5,7,9,11,13 (add 2) • I can create a number pattern using concrete materials or numerals. e.g use outdoor materials, Cuisenaire Rods, cubes, coloured shapes etc.	• I can continue and create a number pattern using my knowledge of the rule. e.g 9,12,15,18.... (add 3) 32,28,24... (subtract 4) 2,4,8,16.....(doubles)	Describes, continues and creates number patterns using addition, subtraction, doubling, halving, counting in jumps (skip counting) and known multiples.

CURRICULUM ORGANISER: EXPRESSIONS & EQUATIONS		**EXPERIENCES & OUTCOMES:** I can compare, describe and show number relationships, using appropriate vocabulary and the symbols for equals, not equal to, less than and greater than. MTH 1-15a 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		
Core Aspect & Skills Focus	**Phase 1** →	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	equal, equal to, not equal to, less than, greater than, balance, equals symbol (=), the same as (=), (>), (<)	Equal, equal to, not equal to, less than, greater than, balance, equals symbol (=), compare (=), (≠), (>), (<)	equal, equal to, not equal to, less than, greater than, balance, equals symbol (=), compare, equivalence (=), (≠), (>), (<)	Understands and accurately uses the terms 'equal to', 'not equal to', 'less than', 'greater than', and the related symbols (=, ≠, <, >) when comparing quantities.
Use mathematical vocabulary and notation **Interpret Questions** **Reason algebraically**	• I know that the (=) symbol signifies equivalence. e.g. 4+5 = 9, 9=4+5 • I can compare numbers to decide which one is bigger or smaller for numbers up to 100 using the greater than or less than symbol to complete the statement. e.g 34 < 87 96 > 40	• I know that the (=) symbol signifies equivalence. e.g. 58 + 7 = 65, 65 = 58 +7 • I can compare numbers to decide which one is bigger or smaller for numbers beyond 100 using the greater than or less than symbol to complete the statement. e.g 125 > 75 268 < 500	• I know that the (=) symbol signifies equivalence. e.g. 178=123+55 • I know that (≠) symbol means 'not equal to'. e.g 23 + 45 ≠ 70 • I can compare numbers to decide which one is bigger or smaller for numbers within 1000 using the greater than or less than symbol to complete the statement.	Applies understanding of the equals sign as a balance, and knowledge of number facts, to solve simple algebraic problems where a picture or symbol is used to represent a number, for example, υ + 17 = 30 and υ × 6 = 30.

Link mathematical concepts **Mental agility**		• I can find the value of a missing symbol in a calculation. e.g 45 + 📖 = 52 2 x ◎ = 16 15 - ◆ = 8	e.g. 980 > 789 657 < 888 • I can find the value of a missing symbol in a calculation. e.g 46 + ☺ = 120 350 - ◆ = 125 ❄ x 4 = 24	

CURRICULUM ORGANISER: PROPERTIES OF 2D SHAPES & 3D OBJECTS		**EXPERIENCES & OUTCOMES:** I have explored simple 3D objects and 2D shapes and can identify, name and describe their features using appropriate vocabulary. MTH 1-16a I can explore and discuss how and why different shapes fit together and create a tiling pattern with them. MTH 1-16b		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	2D shapes, square, rectangle, circle, semi-circle, triangle, pentagon, hexagon, sides, corners, straight, curved, round, flat, 3D objects, cube, cuboid, cone, cylinder, sphere, faces	2D shapes, properties, regular, irregular, square, rectangle, circle, triangle, pentagon, hexagon, octagon, rhombus, kite, triangular, rectangular, circular, straight, curved, round, corners, sides, 3D objects, cube, cuboid, sphere, cylinder, cone, pyramid, faces, edges, vertices, vertex, angle	2D shapes, regular, irregular, position, orientation, diagonal, vertical, horizontal, oval, triangle, pentagon, hexagon, octagon, rhombus, kite, trapezium, nonagon, decagon, dodecagon, parallelogram, pentagonal, hexagonal, octagonal, 3D objects, cube, cuboid, sphere, cylinder, cone, pyramid, triangular prism, faces, vertices, edges, angle/s, square base	Uses mathematical language to describe the properties of a range of common 2D shapes and 3D objects including side, face, edge, vertex, base and angle.
Use mathematical vocabulary and notation	• I can name and identify a range of regular 2D shapes. e.g square, rectangle, circle triangle, pentagon and hexagon (including real life examples) • I can create 2D shapes by cutting, printing, drawing or using geoboards to build my understanding.	• I can name and identify a range of simple regular and irregular 2D shapes. e.g square, rectangle, circle triangle, pentagon, hexagon, octagon, rhombus, kite. • I can create 2D shapes by cutting, printing, drawing or using geoboards to build my understanding.	• I can identify the three types of lines: vertical, horizontal and diagonal. • I can name and identify a range of simple regular and irregular 2D shapes in different orientations. e.g square, rectangle, circle, oval, triangle, pentagon, hexagon, octagon, rhombus, kite	Names, identifies and classifies a range of simple 2D shapes and 3D objects and recognises these shapes in different orientations and sizes.

Use mathematical vocabulary and notation **Interpret Questions**	• I can classify regular 2D shapes based of different properties. e.g number of sides, straight/curved sides, number of corners etc. • I can name and identify a range of 3D objects. e.g cube, cuboid, sphere, cylinder, cone (including real life examples). • I can make a 3D object using a range of modelling and construction materials. e.g cube or cuboid • I can classify 3D objects using different criteria. e.g has 6 faces, rolls/unable to roll	• I can classify regular 2D shapes based of different properties. • e.g number of sides, straight/curved sides, number of corners etc. • I can name and identify a range of 3D objects. e.g cube, cuboid, sphere, cylinder, cone, pyramid (including real life examples). • I can make a 3D object using a range of modelling and construction materials. • I can classify 3D objects using different criteria. e.g has 6 faces, rolls/unable to roll	• I can create 2D shapes by cutting, printing, drawing or using geoboards to build my understanding. • I can name, identify and classify a range of 3D objects. e.g cube, cuboid, sphere, cylinder, cone, pyramid, triangular prism (including real life examples).	
Use mathematical vocabulary and notation	• I can identify simple 2D shapes within a 3D object. e.g. a square within a cube a rectangle within a cuboid a circle within a cone	• I can identify simple 2D shapes within a 3D object. e.g. a triangle within a pyramid	• I can identify a range of 2D shapes within 3D objects. e.g. a triangle and rectangle within a triangular prism. • I can confidently identify 3D objects from a 2D drawing.	Identifies 2D shapes within 3D objects and recognises 3D objects from 2D drawings

	• I can explore which shapes fit together to create tiling patterns.	• I can identify tiling in the environment. • I can explore and identify which shapes fit together to create a tiling pattern. • I can create a tiling pattern using one or two 2D shapes.	• I can identify and collect examples of tiling patterns in the environment using digital technologies. • I can use a range of 2D shapes to create a tiling pattern. e.g. using concrete materials, drawing or digital technology.	Identifies examples of tiling in the environment and applies knowledge of the features of 2D shapes to create tiling patterns incorporating two different shapes.

CURRICULUM ORGANISER: ANGLES, SYMMETRY & TRANSFORMATION		**EXPERIENCES & OUTCOMES:** I can describe, follow and record routes and journeys using signs, words and angles associated with direction and turning. MTH 1-17a I have developed an awareness of where grid reference systems are used in everyday contexts and can use them to locate and describe position. MTH 1-18a I have explored symmetry in my own and the wider environment and can create and recognise symmetrical pictures, patterns and shapes. MTH 1-19		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	position, direction/s, right, left, forwards, backwards, sideways, towards, away, reverse, over, under, above, below, top, bottom, side, around, in front, behind, front, back, before, after, beside, next to, opposite, apart, between, middle, across, close, far, along, through, higher, lower, slide, roll, turn, full turn, half turn, symmetry, line of symmetry	position, direction/s, journey, right, left, clockwise, anticlockwise, underneath, centre, quarter turn, rotation, angle, right angle, degrees, estimate greater/less than, compass points (North, South, East, West), grid, grid reference, plot, compare, describe, symmetry, line of symmetry, mirror line/reflection	position, direction/s, journey, route right, left, clockwise, anticlockwise, rotation, angle/s, protractor, degrees, compare describe, right angle, grid reference, plot, horizontal, vertical, ascend, descend grid, grid reference, row, column, compass points (N, S, E, W), coordinates, x/y-axis, horizontal, vertical, diagonal, symmetry, line of symmetry, mirror line/reflection	
Use mathematical vocabulary and notation **Interpret Questions**	• I can create and record simple directions using positional vocabulary including right, left, forwards, backwards, full turn and half turn. • I can give and follow simple directions using clear	• I can create and record directions using positional vocabulary including full, half and quarter turn, clockwise, anticlockwise, right and left turn. • I can give and follow simple directions using clear	• I can confidently create, follow and record a variety of directions using different positional vocabulary. • I know that a quarter turn is 90 degrees and that this is a right angle.	Uses technology and other methods to describe, follow and record directions using words associated with angles, directions and turns including, full turn, half turn, quarter turn, clockwise, anticlockwise, right

	positional vocabulary (see above). • Using simple directions, I can programme an online program or a physical robot. e.g. Bee-bot	positional vocabulary (see above). • Using simple directions, I can programme an online program or a physical robot. • I can recognise the 4 main compass points of North, South, East and West.	• Using simple directions, I can programme an online or physical robots. • I can recognise and use the 4 main compass points of North (N) South (S), East (E) and West (W) to follow directions. e.g What direction is a quarter turn clockwise from North? (East)	turn, left turn, right angle. Knows and uses the compass points, North, South, East and West.
Use mathematical vocabulary and notation **Interpret Questions** **Link mathematical concepts**	• Not started in the phase.	• I know that an angle is a measure of turn or rotation. • I know that angles are measured in degrees and a right angle is 90 degrees. • I can find examples of right angles in the environment. e.g. Whiteboard, door etc	• I can use my knowledge of right angles to estimate if an angle is bigger or smaller than 90 degrees. e.g use right angle checker (paper) • I can find examples of right angles in 2D shapes or the environment. e.g. square, rectangle	Knows that a right angle is 90°. Finds right angles in the environment and in well-known 2D shapes Uses informal methods to estimate, compare and describe the size of angles in relation to a right angle.

Use mathematical vocabulary and notation **Interpret Questions**	• Not started in the phase.	• I can give examples of where grid references are used in everyday life. • I can find objects on a grid and give their location. • I understand that when writing coordinates that the horizontal coordinate comes before the vertical coordinate.	• I understand that when writing coordinates that the horizontal coordinate comes before the vertical coordinate. • I can find objects on a grid and give their location, writing the coordinates accurately with brackets and a comma. • I can plot the location of an item/object when given a grid reference. e.g. A castle at (2,4)	Identifies where and why grid references are used. Describes, plots and uses accurate two figure grid references, demonstrating knowledge of the horizontal and vertical location.
Use mathematical vocabulary and notation	• I can find and identify symmetry in patterns, pictures and shapes (one line of symmetry). • I can create a symmetrical picture or design with one line of symmetry.	• I can find and identify symmetry in different patterns, pictures and shapes (one line of symmetry). • I can confidently create a symmetrical picture or design with one line of symmetry	• I can find and identify symmetry in different patterns, pictures and shapes with more than one line of symmetry. • I can create a symmetrical picture or design with more than one line of symmetry.	Identifies symmetry in patterns, pictures, nature and 2D shapes. Creates symmetrical pictures and designs with more than one line of symmetry.

CURRICULUM ORGANISER: DATA & ANALYSIS: (Gaelic) (ES Webinar Pt1) (ES Webinar Pt2) (ES Webinar Pt3)	**EXPERIENCES & OUTCOMES:** ***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*** ***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*** 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			
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	data, information, table, chart, graph, gather, collect, sorting, display, questions, answer, pictogram, block graph, Carroll diagram, tally marks, title, axis, x-axis, y-axis scale, favourite, most/least, favourite, popular, most/least, predict, match, How many?	data, information, gather, organising, sort, record, diagram, bar graph, axis, axes, x- axis/ y-axis, horizontal, vertical, scale, increments, Venn diagrams, Carroll diagram, investigate, analyse, identify	data, information, data set, represent, survey, questionnaire, tallies gather/collecting, design, create, organise, sort, display, present, record, scale, increment/s, axes, axis, x- axis/ y-axis, horizontal, vertical, Carroll diagram, Venn diagram, sensors, rain gauge, measuring scale, investigate, interpret, analyse	***Uses correct mathematical vocabulary.***
Use mathematical vocabulary and notation **Interpret questions** **Select and communicate processes and solutions**	• I can ask and answer simple single step questions about a data set. e.g In the class, which is the most owned pet?	• I can create and ask single step questions about a data set. e.g What was the most popular sport? (pupil generated questions) • I can read and interpret a table, pictogram or block graph and answer questions. e.g Which is the most popular after school activity?	• I can interpret bar graphs with non-labelled intervals on the y-axis. • I can match a data set (table) to the corresponding graph and justify my answer. • I can interpret a pictogram (where one unit represents more than one) and answer questions.	***Asks and answers questions to extract key information from a variety of data sets including charts, diagrams, bar graphs and tables***

Justify choice of strategy used **Mental agility** **Link mathematical concepts**			• I can create and ask single step questions about a data set. • I can read and interpret a data set or graph and answer part-part whole or comparison problems. **<u>Quantity Unknown:</u>** e.g On Tuesday, the school sold 64 school lunches. On Wednesday, they sold 76 lunches. What was the total number of lunches sold? **<u>Difference Unknown:</u>** e.g. On Monday, the school sold 93 school lunches. On Thursday, they sold 112 lunches. How many more lunches were sold on Thursday than Monday?	
Use mathematical vocabulary and notation **Interpret questions**	• I can gather data by asking a range of simple, closed questions with a set number of options/choices. e.g What is your favourite season? (Spring, Summer, Autumn or Winter) e.g What is your favourite colour out of these options? (blue, green, red, purple)	• I can design a class survey. • I can gather and collect new data for a purpose by asking a range of questions with a set number of options/choices. e.g Walk to School Week- how do you get to school? (walk, car, bus, bike, park and stride)	• I can design a class survey including the use digital tools to assist with data collection (e.g Microsoft forms to create a survey, questionnaire or poll.)	***Selects and uses the most appropriate way to gather and sort data for a given purpose, for example, a survey, questionnaire or group tallies.***

Select and communicate processes and solutions **Justify choice of strategy used**	• I can gather and sort a range of concrete items or objects (different categories – colour, size) e.g Lego, buttons, outdoor materials • I can use a template to organise and sort the data which I am gathering. e.g table with space for tally marks. • I can record the information given to me using tally marks and can total the number of each option.	• I can use pictures or tally marks to represent the data items gathered. • I can sort and record the data in a table.	• I can gather and collect new data through a survey in the school or local community. • I can explore data gathered through sensors in the local environment (e.g rain gauge or thermometers in the playground). • I can use pictures or tally marks to represent the data items gathered, recording the data in a table.	
Interpret questions **Justify choice of strategy used**	• I can create a pictograph to display the data I have gathered. • I can create a block graph to display the data I have gathered. • I can create a Carroll diagram using two categories.	• I can create a bar graph to display the data I have gathered. • I can create a simple Venn diagram to display the data I have gathered. • I can create a Carroll diagram using two categories.	• I can use digital and non-digital forms to create and display the data I have gathered using the following graphs/diagrams: ○ Bar graph (using Numbers (I-pad), pages (I-pad) or Excel) ○ Simple Venn diagram ○ Carroll diagram with four categories	Uses a variety of different methods, including the use of digital technologies, to display data, for example, as block graphs, bar graphs, tables, Carroll diagrams and Venn diagrams.

	• I can label my graph with an appropriate: ○ title ○ axes	• I can label my graph with an appropriate: ○ title ○ key ○ axes ○ scale	• I can label my graph with an appropriate: ○ title ○ key ○ axes ○ scale (where one unit represents more than one) e.g increments in 2s, 5s or 10s	Includes a suitable title, simple labelling on both axes and an appropriate scale where one unit represents more than one data value in graphs.

CURRICULUM ORGANISER: IDEAS OF CHANCE & UNCERTAINTY :(Gaelic) (ES Webinar)		**EXPERIENCE & OUTCOME:** ***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***		
Core Aspect & Skills Focus	**Phase 1**	**Phase 2**	**Phase 3**	**Benchmark**
Mathematical Vocabulary and Notation	fair/unfair, likely, unlikely, chance, always, sometimes, never, probably, probably not, might, choices, decision making, dice, rolling a number, flip a coin, heads, tails	likely/unlikely, high chance, low chance, certain/uncertainty, definitely, maybe, possibly	Likelihood, very likely, equally likely, possible/impossible, probable, potentially, probability, informed choices, not certain, occurring, predictions, likelihood of events	**Uses mathematical vocabulary appropriately to describe the likelihood of events occurring in everyday situations.**
Interpret questions **Select and communicate processes and solutions** **Determine the reasonableness of a solution**	• I can make a prediction about a situation using the vocabulary certain or not certain.	• I can make predictions about a situation using the vocabulary always, sometimes or never.	• I can confidently use mathematical vocabulary to make predictions about a situation. e.g In a bag, there are 6 apples, 3 oranges and 9 kiwis. Jenny closes her eyes and chooses a piece of fruit from the bag. Which piece of fruit is least likely/ most likely to come out? • I can use data to inform my decision and discuss the likelihood of an event. e.g weather forecast dice rolling in a game.	**Interprets data gathered through everyday experiences to make reasonable predictions of the likelihood of an event occurring.**