

EARLY TO
FOURTH LEVELS



Sumdog Scotland Assessment Library



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Sumdog has now released **curriculum-aligned, ready-made assessments** to help you prioritise teaching and learning.

Unlike traditional assessments, these low-stakes quizzes are an informal means of reliably gauging where children need extra support and additional practice, without making them sit down to complete a written test. Our enhanced student chooser allows you to differentiate with ease, without your students ever knowing what assessment level they are sitting - you can even give them a friendly name!

The assessments are completely aligned to the Curriculum for Excellence, allowing you to set pre-made assessments for any unit that has been mapped to the Benchmarks. To help you track progress with further precision, we have even broken down the benchmarks into smaller, Sumdog milestones (A, B, C).

You can use the Assessment Library to:

- celebrate what children have learned and encourage a growth mindset
- pinpoint gaps in children's understanding with enhanced reports which provide insights at class level and at individual level allowing you to plan next steps
- identify and address any misconceptions, prioritising areas of extra support or intervention
- use common mistakes as supportive of whole class teaching and learning points
- assess children in the engaging and familiar environment of Sumdog. Every correct answer earns them 5 coins to spend in their virtual house!

This assessment framework outlines the milestones and the associated CfE benchmarks covered, along with the number of questions in the assessment. Each milestone is numbered according to the benchmark which it corresponds to and we have included a few typical examples of assessment questions and an overview of the information summary and data provided by our new and enhanced reporting.

So, whether you use these assessments as a pre-check before starting new learning, to formatively assess during the teaching of a new unit or concept, summatively at the end of a unit or just to print/export for evidence tracking and pupil progress, we are sure that the convenience, the data and the reporting will aid and inform your teaching.

And don't forget that we do all the marking for you!

Of course, you can always make your own custom assessments to focus on specific elements of learning too and our improved alignment to Curriculum for Excellence makes this even easier! Look out for new assessment types coming soon as we grow our library.

Early Level – Number, Money and Measure – Estimation and Rounding



Experience and Outcome

I am developing a sense of size and amount by observing, exploring, using and communicating with others about things in the world around me. **MNU 0-01a**

Assessment Milestones (10 Questions)

- 1) I can compare numbers within 10.
- 1) I can count and compare the size of object sets within 5.
- 2) I can count using estimates with blocks within 10.
- 3) I can measure length using non-standard units.
- 3) I can compare the volume of liquid using the vocabulary more / less / about the same.
- 3) I can compare the volume of liquid using the vocabulary most / least / about the same.
- 3) I can compare the weight of items using the vocabulary heaviest, lightest or about the same.
- 3) I can compare the length of an object against a second object using the vocabulary shorter, longer or about the same.

CfE Benchmark

- 1) Recognises the number of objects in a group, without counting (subitising) and uses this information to estimate the number of objects in other groups.
- 2) Checks estimates by counting.
- 3) Demonstrates skills of estimation in the contexts of number and measure using relevant vocabulary, including less than, longer than, more than and the same.

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.

First Level – Number, Money and Measure – Estimation and Rounding



Experience and 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**

Assessment Milestones A (15 Questions)	Assessment Milestones B (15 Questions)	Assessment Milestones C (10 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I can add counters to make a number using Part-Whole Models. 1) I can add counters and numerals to make a number using Part-Whole models. 1) I can estimate and compare within 20, to help me with my estimation and rounding skills. 1) I can count up and down by 1 within 20, with missing numbers to help me with estimation and rounding. 1) I can count 10 more to 50 from 0 with missing numbers. 1) I can identify 10 more within 50, using one number. 	<ul style="list-style-type: none"> 1) I can identify and estimate 2 digit addition, including solving as two-step problems. 1) I can estimate where a number should sit on a number line. 2) I can round 2-digit whole numbers to the nearest 10. 	<ul style="list-style-type: none"> 1) I can use estimation strategies to find the difference in metric lengths. 1) I can use estimation strategies to subtract metric lengths within 100. 1) I can identify and estimate 2- and 3-digit addition, including solving as two-step problems. 2) I can round 3-digit whole numbers to the nearest 10 or 100. 2) Using a marked number line, I can identify in 10's which number is closest, within 1000. 	<ul style="list-style-type: none"> 1) Uses strategies to estimate an answer to a calculation or problem, for example, doubling and rounding. 2) Rounds whole numbers to the nearest 10 and 100 and uses this routinely to estimate and check the reasonableness of a solution.

Second Level – Number, Money and Measure – Estimation and Rounding



Experience and Outcome

I can use my knowledge of rounding to routinely estimate the answer to a problem then, after calculating, decide if my answer is reasonable, sharing my solution with others. **MNU 2-01a**

Assessment Milestones A (15 Questions)	Assessment Milestones B (20 Questions)	Assessment Milestones C (20 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can round 2- and 3-digit numbers to the nearest 10 or 100. 1) can compare two numbers with one place value different. 2) I can solve addition word problems with 2 decimal places in a money context. 1) I can compare numbers to 10,000 using $< = >$ and different representations. 3) I can estimate metric lengths. 	<ol style="list-style-type: none"> 1) I can round 2/3/4-digit numbers to the nearest 10, 100 or 1,000. 1) I can round numbers up to 6 digits to the nearest 10, 100 or 1000. 1) I can estimate +/- questions to the nearest 1,000 within 10,000. 2) I can solve addition word problems with 2 decimal places. 2) I can solve subtraction word problems with 2 decimal places. 3) I can use a marked number line to identify which number is closest within 10,000 to the nearest 10. 3) I can compare two numbers with one place value different using $< = >$ and different representations. 3) I can estimate metric lengths. 	<ol style="list-style-type: none"> 1) I can round numbers to the nearest 10, 100 or 1000 (up to 6 digits). 2) I can compare numbers with 2 decimal places within 1 using $< = >$ and different representations. 2) I can order numbers with 2 decimal places within 1. 2) I can compare numbers with 2 decimal places within 10 using $< = >$ and different representations. 2) I can compare numbers with 1 decimal place within 1,000 using $< = >$ and different representations. 2) I can compare numbers with 2 decimal places within 1,000. 2) I can order numbers with 2 decimal places within 1,000. 2) I can round numbers with 2 decimal places to the nearest whole. 2) I can round numbers with 2 decimal places to the nearest tenth. 3) I can solve addition word problems with up to 2 decimal place numbers. 3) I can solve subtraction word problems with up to 2 decimal place numbers. 	<ol style="list-style-type: none"> 1) Rounds whole numbers to the nearest 1000, 10 000 and 100 000. 2) Rounds decimal fractions to the nearest whole number, to one decimal place and two decimal places. 3) Applies knowledge of rounding to give an estimate to a calculation appropriate to the context.

Third/Fourth Level – Number, Money and Measure – Estimation and Rounding



Experience and Outcome	I can round a number using an appropriate degree of accuracy, having taken into account the context of the problem. MNU 3-01a/MNU-4-01a
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Assessment Milestones A (20 Questions)	Assessment Milestones B (20 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I can compare number with 3 decimal places. 1) I can order numbers with 3 decimal places 1) I can estimate for 3-digit numbers, to the nearest 100, x 1-digit numbers. 1) I can compare decimal tenths within 10. 1) I can round hundredths on a number line. 1) I can round numbers with 2 decimal places to the nearest whole. 1) I can round decimals to nearest tenth or hundredth. 2) I can estimate for 4-digit numbers, to the nearest 100 or 1000 x 1-digit numbers 2) I can round numbers with decimal tenths to the nearest whole number. 2) I can solve addition word problems with up to 2 decimal place numbers/ 2) I can solve subtraction word problems with up to 2 decimal place numbers. 	<ul style="list-style-type: none"> 1) I can order numbers with 3 decimal places. 1) I can compare number with 3 decimal places. 1) I can order numbers with 3 decimal places. 2) I can estimate addition questions with more than 4-digit numbers to the nearest 1,000 – two step questions. 2) I can estimate for 4-digit, to the nearest 100 or 1000, x 1-digit questions. 2) I can estimate addition questions with more than 4-digit numbers to the nearest 100 or 10 – two step questions. 2) I can estimate subtraction questions with more than 4-digit numbers to the nearest to the nearest 1 000 – two step questions. 2) I can estimate subtraction questions with more than 4-digit numbers to the nearest 100 or 10 – two step questions. 	<ul style="list-style-type: none"> 1) Rounds decimal fractions to three decimal places. 2) Uses rounding to routinely estimate the answers to calculations.



Experience and Outcome	I am developing my awareness of how money is used and can recognise and use a range of coins. MNU 0-09a
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Assessment Milestones (10 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I can match single coin amounts within 10p, using numbers or words. 1) I can identify coin amounts within £2. 1) I can match coin amounts within £21) I can compare collections of coins with £ and p. 1) I can order amounts of coins with £ and p 2) I can calculate change within £2. 	<ul style="list-style-type: none"> 1) Identifies all coins to £2. 2) Applies addition and subtraction skills and uses 1p, 2p, 5p and 10p coins to pay the exact value for items to 10p.

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.



First Level – Number, Money and Measure – Money

Experience and Outcome	<p>I can use money to pay for items and can work out how much change I should receive. MNU 1-09a</p> <p>I have investigated how different combinations of coins and notes can be used to pay for goods or be given in change. MNU 1-09b</p>
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Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I can match coin amounts within £21 I can match single coin amounts within 10p using numbers or words. 1) I recognise the value of coins, using most/least vocabulary. 1) I can compare collections of coins up to 50p. 3) I can calculate change within £2, using mixed amount of money (£/p). 	<ul style="list-style-type: none"> 1) I can order amounts with £/p and decimal places to explore different ways of making a total. 2) I can convert money to £5 accurately with the correct notation. 3) I can calculate change within £2, using mixed amounts of money (£/p). 4) I can subtract pence within £2. 4) I can add coins within £2. 	<ul style="list-style-type: none"> 1/4) I can find change with mixed amounts of money using £/p. 2) I can convert decimals in a money context to £5. 3) I can add mixed amounts of money. 3) I can subtract mixed amounts of money. 1/3) I can order a variety of money, up to 2 decimal places. 3) I can compare numbers with 2 decimal places within 10 using < = >. 4) I can find change within £2. 	<ul style="list-style-type: none"> 1) Identifies and uses all coins and notes to £20 and explores different ways of making the same total. 2) Records amounts accurately in different ways using the correct notation, for example, 149p = £1.49 and 7p = £0.07. 3) Uses a variety of coin and note combinations, to pay for items and give change within £10. 4) Applies mental agility number skills to calculate the total spent in a shopping situation and is able to calculate change.

Benchmark not currently covered: Demonstrates awareness of how goods can be paid for using cards and digital technology. **Coming Soon!**

Second Level – Number, Money and Measure – Money



Experience and Outcome	<p>I can manage money, compare costs from different retailers, and determine what I can afford to buy. MNU 2-09a</p> <p>I understand the costs, benefits and risks of using bank cards to purchase goods or obtain cash and realise that budgeting is important. MNU 2-09b</p> <p>I can use the terms profit and loss in buying and selling activities and can make simple calculations for this. MNU 2-09c</p>
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Assessment Milestones A (15 Questions)	Assessment Milestones B (20 Questions)	Assessment Milestones C (20 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I can add mixed amounts of money, subtract mixed amounts of money and calculate change. 1) I can compare numbers with 2 decimal places using $< = >$ up to 10001) I can order numbers with 2 decimal places. 1) I can compare amounts of money with £ and p1) I can order amounts of money with £ or p. 	<ul style="list-style-type: none"> 1) I can compare numbers with up to 2 decimal places using $< = >$ up to 1000. 1) I can order numbers with 2 decimal places. 1) I can add mixed amounts of money, 1) subtract mixed amounts of money and calculate change. 1) I can multiply numbers with 1 decimal place by 10 or 100. 1) I can solve word problems in a money context using addition, subtraction and multiplication. 	<ul style="list-style-type: none"> 1) I can solve word problems with 2 decimals in a money context, using addition, subtraction, multiplication or division strategies. 1) I can multiply numbers with 1 decimal place by 10 or 100. 1) I can add and subtract tenths within 1 decimal. 	<ul style="list-style-type: none"> 1) Carries out money calculations involving the four operations.

Benchmark not currently covered: Demonstrates understanding of the benefits and risks of using bank cards and digital technologies.

Coming Soon! Calculates profit and loss accurately, for example, when working with a budget for an enterprise activity.
Compares costs and determines affordability within a given budget.

Third/Fourth Level – Number, Money and Measure – Money



Experience and Outcome	<p>When considering how to spend my money, I can source, compare and contrast different contracts and services, discuss their advantages and disadvantages, and explain which offer best value to me. MNU 3-09a/MNU-4-09a</p> <p>I can budget effectively, making use of technology and other methods, to manage money and plan for future expenses. MNU 3-09b/MNU-4-09b</p>
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Assessment Milestones A (20 Questions)	Assessment Milestones B (20 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I can solve addition and subtraction word problems with 2 decimal places, in a money context. 1) I can multiply numbers with 1 decimal place by 10 or 100. 1) I can add positive/negative numbers up to +/- 100 to aid with calculating profit and loss. 	<ul style="list-style-type: none"> 1) I can solve addition and subtraction word problems with 2 decimal places, in a money context. 1) I can multiply numbers with 1 decimal place by 10 or 100. 1) I can add positive/negative numbers up to +/- 100 to aid with calculating profit and loss. <p>Further milestones coming soon.</p>	<ul style="list-style-type: none"> 1) Budgets effectively, using digital technology where appropriate, showing development of financial capability.

Benchmark not currently covered: Demonstrates understanding of best value in relation to contracts and services when comparing products.

Coming Soon! Chooses the best value for their personal situation and justifies choices.

Demonstrates knowledge of financial terms, for example, debit/credit, APR, pa, direct debit/standing order and interest rate.

Converts between different currencies.



Experience and Outcome	I can share out a group of items by making smaller groups and can split a whole object into smaller parts. MNU 0-07a
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Assessment Milestones (10 Questions)	CfE Benchmark
<p>1/2) I can identify half of an object.</p> <p>1) I can identify half of a collection of objects within 10.</p> <p>1) I can double up to 10.</p> <p>2/3) I can halve up to 10.</p> <p>3) I can identify equally divided 2D shapes.</p>	<p>1) Splits a whole into smaller parts and explains that equal parts are the same size.</p> <p>2) Uses appropriate vocabulary to describe halves.</p> <p>3) Shares out a group of items equally into smaller groups.</p>

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.



Experience and Outcome

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**

Assessment Milestones A (10 Questions)	Assessment Milestones B (15 Questions)	Assessment Milestones C (20 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can express numbers in words and in ten frames up to 20. 1) I can identify 2D shapes divided equally. 1) I understand the vocabulary half and quarter when looking at a 2D shape. 4) I can use words to describe how much of a container is filled, such as “quarter full”, “empty”, “full”, “three quarter full”. 5) I can identify half of an object or a collection of objects. 6) I can double up to 10. 	<ol style="list-style-type: none"> 1) I can identify and match common fractions. 1) I understand the vocabulary half and quarter when looking at a 2D shape. 3/6) I can understand the numerator and denominator and can create fractions from pictorial representations. 1) I can identify 2D shapes divided equally. 7) I can double and half up to 10. 	<ol style="list-style-type: none"> 1) I can identify and match common fractions. 1) I can understand appropriate mathematical vocabulary around fractions, decimals or percentages. 1) I can identify equally divided 2D shapes. 2) I can round decimal fractions to 0 or 1 using a number line. 3/6) I can understand the numerator and denominator and can create fractions from pictorial representations. 4) I can sequence decimal fractions and understand the greater the number of equal parts the smaller the share. 	<ol style="list-style-type: none"> 1) Explains what a fraction is using concrete materials, pictorial representations and appropriate mathematical vocabulary. 2) Demonstrates understanding that the greater the number of equal parts, the smaller the size of each share. 3) Uses the correct notation for common fractions to tenths, for example, $\frac{1}{2}$, $\frac{2}{3}$ and $\frac{5}{8}$. 4) Compares the size of fractions and places simple fractions in order on a number line. 5) Uses pictorial representations and other models to demonstrate understanding of simple



		<p>4) I can read and identify on a number line showing 0 – 10 which whole number a decimal fraction is closest to.</p> <p>5) I can identify simple equivalent fractions.</p> <p>7) I can double, half and use other strategies to help my understanding.</p>	<p>equivalent fractions, for example, $\frac{1}{2} = \frac{2}{4} = \frac{3}{6}$.</p> <p>6) Explains the role of the numerator and denominator.</p> <p>7) Uses known multiplication and division facts and other strategies to find unit fractions of whole numbers, for example, $\frac{1}{2}$ or $\frac{1}{4}$.</p>
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Second Level – Number, Money and Measure – Fractions, Decimals and Percentages



Experience and Outcome

I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems. **MNU 2-07a**

I can show the equivalent forms of simple fractions, decimal fractions and percentages, and can choose my preferred form when solving a problem, explaining my choice of method. **MNU 2-07b**

I have investigated how a set of equivalent fractions can be created, understanding the meaning of simplest form, and can apply my knowledge to compare and order the most commonly used fractions. **MTH 2-07c**

Assessment Milestones A (10 Questions)	Assessment Milestones B (15 Questions)	Assessment Milestones C (20 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I can count in decimal hundredths within a whole. 1) I can identify on a number line where a decimal fraction to hundredths lies. 2) I can identify and recognise common percentages of a number. 2) I can calculate percentages of a number. 3) I can calculate $\frac{1}{2}$ and $\frac{1}{4}$ of a number mentally. 5) I can identify the shaded shape as being a whole: $\frac{2}{2}$, $\frac{3}{3}$. 5) I can match descriptions of fractions to pictorial representations. 5) I can name pieces of a shape that has been cut into parts, using vocabulary like halves, thirds, half of. 	<ul style="list-style-type: none"> 2) I can solve word problems that call for a percent of a number. 4) I can recognise and calculate equivalent fractions. 4) I can match fractions with small denominators with equivalent pictures. 4) I can identify the unknown denominator needed to form equivalent fractions. 5) I can simplify fractions. 	<ul style="list-style-type: none"> 1) I recognise and calculate equivalent fractions. 1) I can convert decimal fractions to fractions. 1) I can convert simple equivalent fractions, decimal fractions and percentages. 2) I can relate percentages to everyday contexts, including turns of a circle to multiples of 25%. 2) I can solve word problems that call for a percent of a number. 3) Using multiplication skills, I understand how to form fractions from pictorial representations. 4) I can identify the unknown denominator or numerator needed for form equivalent fractions. 5) I can simplify fractions. 5) I can compare and order fractions using $< = >$ 	<ul style="list-style-type: none"> 1) Uses knowledge of equivalent forms of common fractions, decimal fractions and percentages, for example, $\frac{3}{4} = 0.75 = 75\%$, to solve problems. 2) Calculates simple percentages of a quantity and uses this knowledge to solve problems in everyday contexts, for example, calculates the sale price of an item with a discount of 15%. 3) Calculates simple fractions of a quantity and uses this knowledge to solve problems, for example, find $\frac{3}{5}$ of 60. 4) Creates equivalent fractions and uses this knowledge to put a set of most commonly used fractions in order. 5) Expresses fractions in their simplest form.



Experience and Outcome

I can solve problems by carrying out calculations with a wide range of fractions, decimal fractions and percentages, using my answers to make comparisons and informed choices for real-life situations. **MNU 3-07a/MNU 4-07a**

By applying my knowledge of equivalent fractions and common multiples, I can add and subtract commonly used fractions.

MTH 3-07b/MTH 4-07b

Having used practical, pictorial and written methods to develop my understanding, I can convert between whole or mixed numbers and fractions.

MTH 3-07c/MTH 4-07c

I can show how quantities that are related can be increased or decreased proportionally and apply this to solve problems in everyday contexts.

MNU 3-08a/MNU 4-08a

Assessment Milestones A (20 Questions)	Assessment Milestones B (20 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 2) I can solve word problems of proper fractions with addition and subtraction. 3) I can convert between mixed numbers and improper fractions. 4) I can identify unknown improper fractions on a number line. 4) I can identify unknown mixed numbers on a number line and add and subtract these. 4) I can recognise equivalent fractions and match fractions to equivalent pictures/numerals. 5) I can simplify, order and compare fractions, including in everyday contexts. 5) I can identify mixed numbers from pictorial representations and words of wholes and fractions. 5) can identify improper fractions from pictorial representation of wholes and fractions and add and subtract these. 	<ul style="list-style-type: none"> 1) I can convert fractions, decimal fractions and percentages into equivalent fractions, decimal fractions or percentages. 2) I can solve word problems of proper fractions with addition or subtraction. 3) I can identify equivalent fractions and convert between. 4) I can use my knowledge of fractions, decimal fractions and percentages to identify from part and fraction or part and percentage. 5) I can calculate the quantities in a proportional relationship. 5) I can identify proportional relationships from tables and graphs. 5) I can calculate and simplify ratios, including in word problem contexts, with two-unit fractions, terms. 	<ul style="list-style-type: none"> 1) Converts fractions, decimal fractions or percentages into equivalent fractions, decimal fractions or percentages. 2) Adds and subtracts whole numbers and fractions, including when changing a denominator. 3) Converts between whole or mixed numbers, improper fractions and decimal fractions. 4) Uses knowledge of fractions, decimal fractions and percentages to carry out calculations with and without a calculator. 5) Solves problems in which related quantities are increased or decreased proportionally. 6) Expresses quantities as a ratio and where appropriate simplifies, for example, 'if there are 6 teachers and 60 children in a school find the ratio of the number of teachers to the total amount of teachers and children'.

Early Level – Number, Money and Measure – Measurement



Experience and Outcome

I have experimented with everyday items as units of measure to investigate and compare sizes and amounts in my environment, sharing my findings with others. **MNU 0-11a**

Assessment Milestones (10 Questions)

- 1) I can compare the weight of items using vocabulary such as heaviest, lightest or about the same.
- 2) I can compare the volume of liquid using vocabulary such as more/less/about the same.
- 2) I can compare the length of an object against a second object using vocabulary such as shorter, longer or about the same.
- 2) I can compare the length of up to four objects and use vocabulary such as shortest, longest or about the same.
- 3) I can measure length using non-standard units.

CfE Benchmark

- 1) Describes common objects using appropriate measurement language, including tall, heavy and empty.
- 2) Compares and describes lengths, heights, mass and capacities using everyday language, including longer, shorter, taller, heavier, lighter, more and less.
- 3) Estimates, then measures, the length, height, mass and capacity of familiar objects using a range of appropriate non-standard units.

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.

Benchmark not currently covered: Shares relevant experiences in which measurements of lengths, heights, mass and capacities are used, for example, in baking. (Discussion Activity)



First Level – Number, Money and Measure – Measurement

Experience and Outcome	<p>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</p> <p>I can estimate the area of a shape by counting squares or other methods. MNU 1-11b</p>
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Assessment Milestones A (10 Questions)	Assessment Milestones B (15 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can estimate metric lengths, weights and volumes. 3) I can identify the area of a 2D shape. 	<ol style="list-style-type: none"> 1) I can solve unknown lengths in metric units. 1) I can compare metric length. Mass and volume using $< = >$ 2) I can compare and estimate metric volumes and weights. 3) I can match an area expression to a shape. 3) I can use metric units to calculate the area of a rectangle, including when presented as a word problem. 4) I can decide on the most appropriate metric unit of measure. 	<ol style="list-style-type: none"> 1) I can use my knowledge of everyday objects to find the difference in metric length between shapes. 2) I can add and subtract metric lengths, weights and volumes up to 100 and solve related word problems. 3) I can identify the area of a range of 2D shapes. 4) I can select the nearest standard unit for metric measurements. 	<ol style="list-style-type: none"> 1) Uses knowledge of everyday objects to provide reasonable estimates of length, height, mass and capacity. 2) Compares measures with estimates. 3) Recognises that different shapes can have the same area (conservation of area). 4) Records measurements of length, height, mass and capacity to the nearest standard unit, for example, millimetres (mm), centimetres (cm), grams (g), kilograms (kg), millilitres (ml)

Benchmark not currently covered: 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. (Practical activity)

Uses square grids to estimate then measure the areas of a variety of simple 2D shapes to the nearest half square. (Practical activity)

Creates shapes with a given area to the nearest half square using square tiles or grids. (Practical activity)

Second Level – Number, Money and Measure – Measurement



Experience and Outcome	<p>I can use my knowledge of the sizes of familiar objects or places to assist me when making an estimate of measure. MNU 2-11a</p> <p>I can use the common units of measure, convert between related units of the metric system and carry out calculations when solving problems. MNU 2-11b</p> <p>I can explain how different methods can be used to find the perimeter and area of a simple 2D shape or volume of a simple 3D object. MNU 2-11c</p>
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Assessment Milestones A (10 Questions)	Assessment Milestones B (15 Questions)	Assessment Milestones C (20 Questions)	CfE Benchmark
<p>1) I can add metric lengths, weights and volumes up to 100, including when presented as a word problem.</p> <p>3) I can recognise the parts of simple 2D shapes that represent the area.</p> <p>5) I can compare metric measurements.</p>	<p>2) I can identify and calculate the perimeter of a shape, including using a repeated addition strategy.</p> <p>5) I can convert between cm and mm and m and cm and kilos.</p> <p>5) I can complete metric units of measure conversion tables.</p> <p>6) I can measure accurately to the nearest appropriate metric unit, using measuring tools.</p>	<p>2) I can identify and calculate the perimeter of a 2D shapes, including when presented as a word problem.</p> <p>3) I can calculate the area of squares, rectangles and other 2D shapes.</p> <p>4) I can calculate volume of cubes and cuboids in cubic centimetres.</p> <p>5) I can add and subtract metric units, including when presented as word problems.</p> <p>5) I can convert between whole metric measures, such as mg > g, m > km, mm > cm etc.</p>	<p>1) Uses the comparative size of familiar objects to make reasonable estimations of length, mass, area and capacity.</p> <p>2) Calculates the perimeter of simple straight sided 2D shapes in millimetres (mm), centimetres (cm) and metres (m).</p> <p>3) Calculates the area of squares, rectangles and right-angled triangles in square millimetres (mm²), square centimetres (cm²) and square metres (m²).</p> <p>4) Calculates the volume of cubes and cuboids in cubic centimetres (cm³) and cubic metres (m³).</p> <p>5) Converts between common units of measurement using decimal notation, for example, 550 cm = 5.5 m; 3.009 kg = 3009 g.</p> <p>6) Estimates to the nearest appropriate unit, then measures accurately: length, height and distance in millimetres (mm), centimetres (cm), metres (m) and kilometres (km); mass in grams (g) and kilograms (kg); and capacity in millilitres (ml) and litres (l). (Partial)</p>

Benchmark not currently covered: Draws squares and rectangles accurately with a given perimeter or area. (Practical Activity)

Chooses the most appropriate measuring device for a given task and carries out the required calculation, recording results in the correct unit. (Practical Activity)

Reads a variety of scales accurately. (Practical Activity)

Shows awareness of imperial units used in everyday life, for example, miles or stones. (Discussion Activity)

Demonstrates understanding of the conservation of measurement, for example, draw three different rectangles each with an area of 24 cm². (Practical Activity)

Third/Fourth Level – Number, Money and Measure – Measurement



Experience and Outcome	<p>I can solve practical problems by applying my knowledge of measure, choosing the appropriate units and degree of accuracy for the task, and using a formula to calculate area or volume when required. MNU 3-11a/MNU-4-11a</p> <p>Having investigated different routes to a solution, I can find the area of compound 2D shapes and the volume of compound 3D objects, applying my knowledge to solve practical problems. MTH 3-11b/MNU-4-11b</p>
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Assessment Milestones A (15 Questions)	Assessment Milestones B (20 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 2) I can add metric lengths, including when presented as a word problem. 3) I can find and solve the area of a composite rectilinear shape and right-angled shape. 4) I can calculate the volume of a range of 3D objects, including when presented as a word problem. 	<ul style="list-style-type: none"> 1) I can convert between ml and cm³ and L and cm³. 1) I can solve a rectangle's perimeter when given the area. 2) I can relate the area of a parallelogram to the area of a rectangle, triangle or trapezium. 3) I can calculate the area of a range of 3D objects and compare using scalar vocabulary. 4) I can calculate volume in 3D objects from cubes and cuboids. 	<ul style="list-style-type: none"> 1) Converts between standard units to three decimal places and applies this when solving calculations of length, capacity, volume and area. 2) Calculates the area of a 2D shape where the units are inconsistent. 3) Finds the area of compound 2D shapes constructed from squares, rectangles and triangles. 4) Finds the volume of compound 3D objects constructed from cubes and cuboids.

Benchmark not currently covered: Chooses appropriate units for length, area and volume when solving practical problems. (Practical Activity).



Early Level – Number, Money and Measure – Addition

Experience and Outcome	<p>I have explored numbers, understanding that they represent quantities, and I can use them to count, create sequences and describe order. MNU 0-02a</p> <p>I use practical materials and can 'count on and back' to help me understand addition and subtraction, recording my ideas and solutions in different ways. MNU 0-03a</p>
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Assessment Milestones (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can count a line of at least 20 objects using one-to-one correspondence and can use number lines to help me add and subtract within 5 and then 10. 1/5) I can combine two sets of objects to make a total and know how to double numbers. 2) I can use strategies to count random arrays of at least 20 objects. 3) I understand that the count does not alter when objects are re-arranged. 4/7) I can find one more than on a number line and can calculate this mentally. 6) I can count on in ones to demonstrate an understanding of addition. 6) I understand that addition means combining 2 or more groups to find greater totals. 8) I can create addition facts to 10, understanding the symbols. 9) I can solve missing number problems. 	<ol style="list-style-type: none"> 1) Uses one-to-one correspondence to count a given number of objects to 20. 2) Identifies 'how many?' in regular dot patterns, for example, arrays, five frames, ten frames, dice and irregular dot patterns, without having to count (subitising). 3) Groups items recognising that the appearance of the group has no effect on the overall total (conservation of number). 4) Counts on and back in ones to add and subtract. 5) Doubles numbers to a total of 10 mentally. 6) When counting objects, understands that the number name of the last object counted is the name given to the total number of objects in the group. 7) Adds and subtracts mentally to 10. 8) Uses appropriately the mathematical symbols +, - and =. 9) Solves simple missing number problems.

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.



First Level – Number, Money and Measure – Addition

Experience and Outcome	<p>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</p> <p>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</p>
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Assessment Milestones A (10 Questions)	Assessment Milestones B (15 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I can skip count forward by 2s, 5s and 10s in sequence, from any given number. 5) I understand that the order in which I add numbers does not matter, for example I understand that $8 + 4$ is the same as $4 + 8$. 5) I can use my understanding of the commutative law to choose strategies to aid me, such as counting on from the bigger number. 2) I can identify the whole amount and the parts within addition sums and can partition single digit numbers to help me bridge within 20. 3) I understand the relationship between adding and subtracting and can use this knowledge. 	<ul style="list-style-type: none"> 1) I know the forward number sequence to 1000. 1) I can use strategies, including counting in chunks on an empty number line, to add within 100. 1) I can use my knowledge of doubles and near doubles to help me add up to 2 digits. 1) I can count in twos, fives and tens forwards within 100 from any number. 1) I can skip count in 100s up to at least 1000. 2) I can partition 2-digit numbers to mentally add the ones then the tens, without carrying. 5) I can carry out an addition calculation to check my subtraction calculation. 	<ul style="list-style-type: none"> 1) I can count in 10s and 100s up to at least 1000 from any number. 2) I can partition 2-digit numbers to mentally add the ones then the tens, with carrying. 2) I can use empty number lines to solve missing number problems within 100. 3) Double any 2-digit number mentally. 4) I can use strategies, including counting in chunks on an empty number line, to add within 1000. 5) I understand the relationship between adding and subtracting and can use this to check written calculations. 	<ul style="list-style-type: none"> 1) Counts forwards and backwards in 2s, 5s, 10s and 100s. 2) Solves addition and subtraction problems with three-digit whole numbers. 3) Demonstrates understanding of the commutative law, for example, $6 + 3 = 3 + 6$ or $2 \times 4 = 4 \times 2$. 4) Adds and subtracts multiples of 10 or 100 to or from any whole number to 1000. 5) Applies knowledge of inverse operations (addition and subtraction; multiplication and division).

Benchmark not currently covered: Uses correct mathematical vocabulary when discussing the four operations including, subtract, add, sum of, total, multiply, product, divide and shared equally. (Discussion Activity)

Second Level – Number, Money and Measure – Addition



Experience and Outcome	<p>I have extended the range of whole numbers I can work with and having explored how decimal fractions are constructed, can explain the link between a digit, its place and its value. MNU 2-02a</p> <p>Having explored the need for rules for the order of operations in number calculations, I can apply them correctly when solving simple problems. MTH 2-03c</p> <p>Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others. MNU 2-03a</p>
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Assessment Milestones A (15 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can add multiples of 10 to any given number. 2) I can add 4-digit numbers together, using appropriate strategies to do so efficiently. 2) I can add numbers to one decimal place. 	<ol style="list-style-type: none"> 2) I can add multiples of 100 to any given number. 2) I can add numbers to two decimal places, mentally. 2) I can add 6-digit numbers together. 	<ol style="list-style-type: none"> 1) I can add multiples of 1000 to any given number. 2) I can add numbers to two decimal places in a variety of real-life contexts 3) I know the order of operations and can use them correctly when solving problems. 	<ol style="list-style-type: none"> 1) Adds and subtracts multiples of 10, 100 and 1000 to and from whole numbers and decimal fractions to two decimal places. 2) Adds and subtracts whole numbers and decimal fractions to two decimal places, within the number range 0 to 1 000 000. 3) Applies the correct order of operations in number calculations when solving multi-step problems.



Early Level – Number, Money and Measure – Subtraction

Experience and Outcome	I have explored numbers, understanding that they represent quantities, and I can use them to count, create sequences and describe order. MNU 0-02a I use practical materials and can 'count on and back' to help me understand addition and subtraction, recording my ideas and solutions in different ways. MNU 0-03a
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Assessment Milestones (10 Questions)	CfE Benchmark
<p>1/3) I know that subtraction means taking away from a group to reveal a smaller number and can use one-to-one correspondence to do this.</p> <p>2) I can compare groups of objects to find the difference between 2 numbers, without having to count.</p> <p>4) I can count back in ones to demonstrate an understanding of subtraction.</p> <p>5/7) I understand subtraction facts to 10.</p> <p>6) I can take objects away from a set and find the new total, demonstrating understanding that the last object counted is the name for the group.</p> <p>7) I can use number lines to do subtraction within 5 and then 10.</p> <p>8) I can identify the symbols for adding, subtracting, equals, more than and less than (>, <).</p> <p>9) I can use strategies to find missing addends e.g. $6 + t = 10$."</p>	<p>1) Uses one-to-one correspondence to count a given number of objects to 20.</p> <p>2) Identifies 'how many?' in regular dot patterns, for example, arrays, five frames, ten frames, dice and irregular dot patterns, without having to count (subitising).</p> <p>3) Groups items recognising that the appearance of the group has no effect on the overall total (conservation of number).</p> <p>4) Counts on and back in ones to add and subtract.</p> <p>5) Doubles numbers to a total of 10 mentally.</p> <p>6) When counting objects, understands that the number name of the last object counted is the name given to the total number of objects in the group.</p> <p>7) Adds and subtracts mentally to 10.</p> <p>8) Uses appropriately the mathematical symbols +, - and =.</p> <p>9) Solves simple missing number problems.</p>

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.



First Level – Number, Money and Measure – Subtraction

Experience and Outcome	<p>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</p> <p>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</p>
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Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can count on from the larger number to subtract within 20. 2) I can identify the whole amount and the parts within subtraction sums. 2) I can partition single digit numbers to help me bridge 10 when subtracting within 20. 5) I understand the relationship between adding and subtracting and can use this knowledge to help me solve problems. 	<ol style="list-style-type: none"> 1) I know the backward number sequence from 1000 to 0 and can use strategies, including counting in chunks to subtract within 100. 1) I can count in tens backwards within 100 from any number. 1) I can count in fives backwards within 100. 5) I can carry out a subtraction calculation to check my addition calculation. 	<ol style="list-style-type: none"> 3) I can use strategies, including counting in chunks on an empty number line to subtract within 1000. 4) I can count in tens backwards within 1000 from any number. 5) I understand the relationship between adding and subtracting and can use this to check written calculations. 	<ol style="list-style-type: none"> 1) Counts forwards and backwards in 2s, 5s, 10s and 100s. 2) Solves addition and subtraction problems with three-digit whole numbers. 3) Demonstrates understanding of the commutative law, for example, $6 + 3 = 3 + 6$ or $2 \times 4 = 4 \times 2$. 4) Adds and subtracts multiples of 10 or 100 to or from any whole number to 1000. 5) Applies knowledge of inverse operations (addition and subtraction; multiplication and division).

Second Level – Number, Money and Measure – Subtraction



Experience and Outcome

I have extended the range of whole numbers I can work with and having explored how decimal fractions are constructed, can explain the link between a digit, its place and its value. **MNU 2-02a**

Having explored the need for rules for the order of operations in number calculations, I can apply them correctly when solving simple problems. **MTH 2-03c**

I can show my understanding of how the number line extends to include numbers less than zero and have investigated how these numbers occur and are used. **MNU 2-04a**

Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others. **MNU 2-03a**

Assessment Milestones A (15 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can confidently subtract multiples of 10 from any given number. 2) I can subtract 4-digit numbers. 2) I can subtract numbers to one decimal place. 	<ol style="list-style-type: none"> 1) I can confidently subtract multiples of 100. 2) I can subtract 6-digit numbers together. 2) I can subtract numbers to two decimal places. 	<ol style="list-style-type: none"> 1) I can confidently subtract multiples of 1000. 2) Subtract numbers to two decimal places in a variety of real-life contexts. 3) I know the order of operations and can use them correctly when solving problems. (+/- only). 	<ol style="list-style-type: none"> 1) Adds and subtracts multiples of 10, 100 and 1000 to and from whole numbers and decimal fractions to two decimal places. 2) Adds and subtracts whole numbers and decimal fractions to two decimal places, within the number range 0 to 1 000 000. 3) Applies the correct order of operations in number calculations when solving multi-step problems.



Experience and Outcome	<p>I can use a variety of methods to solve number problems in familiar contexts, clearly communicating my processes and solutions. MNU 3-03a</p> <p>I can continue to recall number facts quickly and use them accurately when making calculations. MNU 3-03b</p> <p>I can use my understanding of numbers less than zero to solve simple problems in context. MNU 3-04a</p>
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Assessment Milestones A (20 Questions)	Assessment Milestones B (20 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can solve addition and subtraction problems in familiar contexts with whole numbers and decimal fractions to 3 decimal places. 2) I can solve addition and subtraction problems working with integers. 3) I can solve multiplication and division problems in familiar contexts working with whole numbers and decimal fractions to three decimal places. 4) I can quickly recall multiplication and division facts to the 10th multiplication table. 4) I can recall the 11 times table and use this to calculate multiplication and division facts. 	<ol style="list-style-type: none"> 1) I can solve addition and subtraction problems working with whole numbers and decimal fractions to three decimal places. 1/3) I can apply my knowledge of the order of operations to solve any calculation including calculations which involve brackets. 2) I can solve addition and subtraction problems in familiar contexts with integers. 3) I can recall the 12 times table and use this to calculate multiplication and division facts. 3) I can solve multi-step decimal multiplication questions. 4) I can solve multiplication and division problems in familiar contexts with integers. 	<ol style="list-style-type: none"> 1) Solves addition and subtraction problems working with whole numbers and decimal fractions to three decimal places. 2) Solves addition and subtraction problems working with integers. 3) Solves multiplication and division problems working with whole numbers and decimal fractions to three decimal places. 4) Solves multiplication and division problems working with integers.

Note: At Third/Fourth level – Number and Number Processes have not been broken down any further. This assessment covers Addition, Subtraction, Multiplication, Division and Place Value as indicated from the Benchmarks.



First Level – Number, Money and Measure – Multiplication

Experience and 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
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Assessment Milestones A (10 Questions)	Assessment Milestones B (15 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<p>4) I can double 2-digit multiples of 10.</p> <p>5) I can interpret and solve a range of one step word problems when I am told the operation being used.</p>	<p>1/5) I understand that 3×5 is the same as 5×3.</p> <p>2) I know that when we are multiplying we are making groups of a given amount e.g. 2×5 means 2 groups of 5.</p> <p>2) I can apply a range of strategies to determine multiplication facts for the 2, 4, 8, 5 and 10 times tables.</p> <p>3) I can interpret and solve a range of one step word problems when I have to work out the correct operation to complete the calculations.</p> <p>5) I can multiply a single digit number by 10.</p>	<p>1/5) I can use known multiplication facts to help me solve others by 'switching', for example if I know 8×3 is 24 therefore I know 3×8 is 24.</p> <p>2) I can apply a range of strategies to determine multiplication facts for the 3-, 6- and 9-times tables.</p> <p>3) I can interpret and solve a range of word problems with more than one step and apply the correct operations to complete the calculation.</p> <p>4) I can multiply a single digit number by 100.</p>	<p>1) Demonstrates understanding of the commutative law, for example, $6 + 3 = 3 + 6$ or $2 \times 4 = 4 \times 2$.</p> <p>2) Applies strategies to determine multiplication facts, for example, repeated addition, grouping, arrays and multiplication facts.</p> <p>3) Uses multiplication and division facts to solve problems within the number range 0 to 1000.</p> <p>4) Multiplies and divides whole numbers by 10 and 100 (whole number answers only).</p> <p>5) Applies knowledge of inverse operations (addition and subtraction; multiplication and division).</p>

Benchmark not currently covered: Uses correct mathematical vocabulary when discussing the four operations including, subtract, add, sum of, total, multiply, product, divide and shared equally. (Discussion Activity)

Second Level – Number, Money and Measure – Multiplication



Experience and Outcome	<p>I have explored the contexts in which problems involving decimal fractions occur and can solve related problems using a variety of methods. MNU 2-03b</p> <p>Having explored the need for rules for the order of operations in number calculations, I can apply them correctly when solving simple problems. MTH 2-03c</p> <p>Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others. MNU 2-03a</p>
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Assessment Milestones A (20 Questions)	Assessment Milestones B (15 Questions)	Assessment Milestones C (10 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I can recall multiplication facts to the 10th multiplication table. 2/3) I can multiply whole numbers and decimal fractions (up to 1 decimal place) by 10, 100 and 1000. 2) I can multiply a multiple of 10, 100 or 1000 by a single digit number, for example 50×3. 4) I can multiply a two-digit number by a single digit number. 	<ul style="list-style-type: none"> 2/3) I can multiply whole numbers and decimal fractions (up to 2 decimal places) by 10, 100 and 1000. 4) I can multiply two-digit whole numbers by multiples of 10, 100 or 1000 for example 25×70. 4) I can multiply 2 digits by 2 digit numbers. 5) I can multiply numbers with up to 1 decimal place by a single digit. 	<ul style="list-style-type: none"> 1) Identify which multiplication matches a given answer (including 3-digit x 1 digit and 4-digit x 1 digit). 1) Identify equivalent multiplication calculations e.g.: $5 \times 3 \times 2 = 3 \times 10$. 5) I can multiply numbers with two decimal places by a single digit. 6) I know the order of operations and can use them correctly when solving problems. 	<ul style="list-style-type: none"> 1) Uses multiplication and division facts to the 10th multiplication table. 2) Multiplies and divides whole numbers by multiples of 10, 100 and 1000. 3) Multiplies and divides decimal fractions to two decimal places by 10, 100 and 1000. 4) Multiplies whole numbers by two-digit numbers. 5) Multiplies decimal fractions to two decimal places by a single digit. 6) Applies the correct order of operations in number calculations when solving multi-step problems.

First Level – Number, Money and Measure – Division



Experience and 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**

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**

Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can identify equal groups from pictorial representations and combine or count them to make a larger number. 1) I can use array dots to calculate the total. 2) I understand the term 'half' and can answer questions using this. 	<ol style="list-style-type: none"> 3) I can divide a two-digit multiple of 10 by a single digit, for example $80 \div 10$. 1) I can apply a range of strategies to determine division facts, for example repeated subtraction. 2/4) I can interpret and solve a range of one step word problems when I have to work out the correct operation to complete the calculations 	<ol style="list-style-type: none"> 3) I can divide a three digit multiple of 100 by 100, for example $600 \div 100$. 3) I can divide a three digit multiple of 100 by 10, for example $400 \div 10$. 3) I can divide a three digit multiple of 10 by 10, for example $560 \div 10$. 1) I can apply a range of strategies to determine division facts. 2) I can interpret and solve a range of word problems with more than one step, and applies the correct operations to complete the calculation. 	<ol style="list-style-type: none"> 1) Applies strategies to determine division facts, for example, repeated subtraction, equal groups, sharing equally, arrays and multiplication facts. 2) Uses multiplication and division facts to solve problems within the number range 0 to 1000. 3) Multiplies and divides whole numbers by 10 and 100 (whole number answers only). 4) Applies knowledge of inverse operations (addition and subtraction; multiplication and division).

Benchmark not currently covered: Uses correct mathematical vocabulary when discussing the four operations including, subtract, add, sum of, total, multiply, product, divide and shared equally. (Discussion Activity)

Second Level – Number, Money and Measure – Division



Experience and Outcome	<p>I have explored the contexts in which problems involving decimal fractions occur and can solve related problems using a variety of methods. MNU 2-03b</p> <p>Having explored the need for rules for the order of operations in number calculations, I can apply them correctly when solving simple problems. MTH 2-03c</p> <p>Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others. MNU 2-03a</p>
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Assessment Milestones A (20 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can recall division facts to the 10th multiplication table. 2) I can divide a multiple of 10, 100 or 1000 by a single digit using table facts, for example $450 \div 9$. 2/3) I can divide whole numbers and decimal fractions (up to 1 decimal place) by 10, 100 and 1000. 4) I can divide a two-digit number by a single digit number including remainder. 	<ol style="list-style-type: none"> 1) I can identify the operation that connects two whole numbers. 4) I can divide whole numbers and decimal fractions (up to 2 decimal places) by 10, 100 and 1000. 	<ol style="list-style-type: none"> 2/3) I can divide whole numbers and decimal fractions (up to 3 decimal places) by 10, 100 and 1000. 4) I can divide a number by a single digit, where answers include a decimal fraction, for example $78 \div 4 = 19.5$. 5) I know the order of operations and can use them correctly when solving problems. 	<ol style="list-style-type: none"> 1) Uses multiplication and division facts to the 10th multiplication table. 2) Multiplies and divides whole numbers by multiples of 10, 100 and 1000. 3) Multiplies and divides decimal fractions to two decimal places by 10, 100 and 1000. 4) Divides whole numbers and decimal fractions to two decimal places, by a single digit, including answers expressed as decimal fractions, for example, $43 \div 5 = 8.6$. 5) Applies the correct order of operations in number calculations when solving multi-step problems.



Experience and Outcome

I have explored numbers, understanding that they represent quantities, and I can use them to count, create sequences and describe order. **MNU 0-02a**

Assessment Milestones (10 Questions)

- 1) I know the forward number sequence to 20 and then 30 and beyond.
- 2) I know the backward number sequence from 20.
- 3/4/5) I can recognise, read, order and sequence numerals to at least 20.
- 4) I can place 3 non-consecutive numbers to at least 20 in order.
- 5) I can find numbers on a number line to at least 20, including identifying missing numbers and before and after numbers.
- 6) I can identify the position of an object using ordinal numbers.
- 6) I understand the terms 'before' and 'after', 'in between', 'less than' and 'more than'.
- 7) I can subitise using regular and irregular dot patterns, arrays, five frames, ten frames to at least 10.
- 7) I can explore all possible partitions of numbers to at least 10.

CfE Benchmark

- 1) Recalls the number sequence forwards within the range 0-30, from any given number.
- 2) Recalls the number sequence backwards from 20.
- 3) Identifies and recognises numbers from 0 to 20.
- 4) Orders all numbers forwards and backwards within the range 0-20.
- 5) Identifies the number before, the number after and missing numbers in a sequence within 20.
- 6) Uses ordinal numbers in real life contexts, for example, 'I am third in the line'.
- 7) Partitions quantities to 10 into two or more parts and recognises that this does not affect the total.

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.

Benchmark not currently covered: Explains that zero means there is none of a particular quantity and is represented by the numeral 0. multiply, product, divide and shared equally and Uses the language of before, after and in-between. (Discussion Activity)

First Level – Number, Money and Measure – Place Value



Experience and Outcome	<p>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</p> <p>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</p>
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Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I know the forward number sequence to 100 and the backward sequence from 100 to 0. 1) I can read numbers to 100 in numerals. 1) I can order consecutive numbers and use < and > to compare two numbers within 100. 1) I can find missing numbers on a number line or square up to 100. 3) I can partition single digit numbers to help me bridge 10 when adding or subtracting within 20 	<ol style="list-style-type: none"> 1) I can read and write numbers to 1000 in numerals. 1) I can order non-consecutive numbers within 100 (smallest to biggest and biggest to smallest). 2) I understand zero as a placeholder in whole numbers to at least 100. 	<ol style="list-style-type: none"> 1) I can order consecutive and non-consecutive numbers within 1000 (smallest to biggest and biggest to smallest). 1) I can use < and > to compare two numbers within 1000. 1) I can find missing numbers in part of a number line or square up to 1000. 2) I understand zero as a placeholder in whole numbers to at least 1000. 3) I can partition a three-digit number into thousands, hundreds, tens and ones, identifying the value of each digit. 	<ol style="list-style-type: none"> 1) Reads, writes, orders and recites whole numbers to 1000, starting from any number in the sequence. 2) Demonstrates understanding of zero as a placeholder in whole numbers to 1000. 3) Identifies the value of each digit in a whole number with three digits, for example, $867 = 800 + 60 + 7$.

Benchmark not currently covered: Uses correct mathematical vocabulary when discussing the four operations including, subtract, add, sum of, total, multiply, product, divide and shared equally. (Discussion Activity)

Second Level – Number, Money and Measure – Place Value



Experience and Outcome	<p>I have extended the range of whole numbers I can work with and having explored how decimal fractions are constructed, can explain the link between a digit, its place and its value. MNU 2-02a</p> <p>I have explored the contexts in which problems involving decimal fractions occur and can solve related problems using a variety of methods. MNU 2-03b</p> <p>I can show my understanding of how the number line extends to include numbers less than zero and have investigated how these numbers occur and are used. MNU 2-04a</p>
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Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can count, order, write whole numbers up to 10 000. 2) I can read, write and order numbers to 1 decimal place. 3) I can partition whole numbers up to 10 000 into tens of thousands, thousands, hundreds, tens and ones. 3) I can partition decimal fractions with up to at least 1 decimal place. 	<ol style="list-style-type: none"> 1) I can count, order, write whole numbers up to 100 000. 4) I can use decimals to 2 places in money. 3) I can identify the place value of tenths and hundredths. 3) I can partition whole numbers up to 100 000 into tens of thousands, thousands, hundreds, tens and ones. 3) I can partition whole numbers up to 100 000 into hundreds of thousands, tens of thousands, thousands, hundreds, tens and ones. 3) I can partition decimal fractions with up to at least 2 decimal places. 4) I can understand negative numbers in real life contexts. 5) I can read, write and order numbers to 2 decimal places. 	<ol style="list-style-type: none"> 1) I can count, order, write whole numbers up to 1 000 000. 2) I can read, write and order numbers to 3 decimal places. 3) I can partition whole numbers up to 1 000 000 into tens of thousands, thousands, hundreds, tens and ones. 3) I can partition whole numbers up to 1 000 000 into hundreds of thousands, tens of thousands, thousands, hundreds, tens and ones. 3) I can partition whole numbers up to 1 000 000 into millions, hundreds of thousands, tens of thousands, thousands, hundreds, tens and ones. 3) I can partition decimal fractions with up to at least 3 decimal places. 4) I can use decimals to 3 places in practical measurement, for example 10.155km. 5) I can locate negative numbers on a number line. 5) I can order negative numbers. 	<ol style="list-style-type: none"> 1) Reads, writes and orders whole numbers to 1 000 000, starting from any number in the sequence. 2) Reads, writes and orders sets of decimal fractions to three decimal places. 3) Partitions a wide range of whole numbers and decimal fractions to three decimal places, for example, $3\cdot6 = 3$ ones and 6 tenths = 36 tenths. 4) Identifies familiar contexts in which negative numbers are used. 5) Orders numbers less than zero and locates them on a number line.

Benchmark not currently covered: Explains the link between a digit, its place and its value for whole numbers to 1 000 000 and Explains the link between a digit, its place and its value for numbers to three decimal places. (Discussion Activity)



Experience and Outcome

I am aware of how routines and events in my world link with times and seasons and have explored ways to record and display these using clocks, calendars and other methods. **MNU 0-10a**

Assessment Milestones (10 Questions)

- 1) I can put several events in time sequence.
- 2) I can name and sequence the days of the week and recognise language such as before, after, yesterday, tomorrow.
- 2) I can sequence the seasons and months of the year.
- 2) I can explore different types of calendars.
- 3) I can read analogue o'clock times (12 hour) and understand that it has an hour and minute hand.
- 3) I can read digital o'clock times (12 hour) and represent o'clock on a clock face.
- 3) I am familiar with time language for example - before, after, o'clock, hour hand and minute hand.

CfE Benchmark

- 1) Links daily routines and personal events to time sequences.
- 2) Names the days of the week in sequence, knows the months of the year and talks about features of the four seasons in relevant contexts.
- 3) Reads analogue and digital o'clock times (12 hour only) and represents this on a digital display or clock face.

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.

Benchmark not currently covered: Recognises, talks about and where appropriate, engages with everyday devices used to measure or display time, including clocks, calendars, sand timers and visual timetables and uses appropriate language when discussing time, including before, after, o'clock, hour hand and minute hand. (Discussion Activity)



Experience and Outcome

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**

Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can tell the time using half and quarter past on analogue and digital 12 hour clocks. 1) I can convert between digital time and analogue displays using half past and quarter past. 2) I know the months of the year in order. 2) I am beginning to understand that real life tasks/events may take seconds, minutes or hours. 2) I know that 1 year has 12 months. 2) I know that 1 week is 7 days. 2) I understand values of time e.g. seconds are smaller than minutes, and years are longer than months. 4) I can name and sequence the months of the year. 4) I can link months to the appropriate season. 	<ol style="list-style-type: none"> 1) I can tell the time using quarter to on analogue and digital 12 hour clocks. 1) I can convert between digital and analogue displays using quarter to. 1) I understand that am is before midday and pm is after midday. 1) I can record 12 hour times using am and pm correctly within 15 minute intervals. 2) I know that 1 minute is 60 seconds. 2) I know that 1 hour is 60 minutes. 2) I am learning ways of remembering how many days are in each month. 3) I can read a timetable in 12 hour notation. 4) I know the months of the year. 4) I know the ordinal number of the months, for example January is the first month. 	<ol style="list-style-type: none"> 1) I can convert between digital and analogue displays. 2) I know that 1 day is 24 hours. 2) I know that there are 52 weeks in a year. 2) I know that there are 365 days in a year. 2) I know that there are 366 days in a leap year and why there is a leap year. 2) I know how many days are in each month. 2) I have an understanding of how long a second, minute and hour is and what can be done in this time. 3) I can change dates between the full format (7th April 2015) and the short format (07.04.15 or 7/4/15). 3) I can use timetables in 12-hour notation to plan key events. 	<ol style="list-style-type: none"> 1) Tells the time using half past, quarter past and quarter to using analogue and digital 12-hour clocks. 2) 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. 3) Uses and interprets a variety of calendars and 12-hour timetables to plan key events. 4) Orders the months of the year and relates these to the appropriate seasons.



5) I can compare how long things take, for example break and lunch, and say which takes longer.

4) I can relate the months of the year to their seasons.

3) I can use a variety of timetables or calendars to calculate durations

Benchmark not currently covered: Records 12-hour times using am and pm and is able to identify 24-hour notation, for example, on a mobile phone or computer. (Practical Activity) Records the date in a variety of ways, using words and numbers (Practical Activity) Selects and uses appropriate timers for specific purposes.. (Practical Activity)

Second Level – Number, Money and Measure – Time



Experience and Outcome	<p>I can use and interpret electronic and paper-based timetables and schedules to plan events and activities and make time calculations as part of my planning. MNU 2-10a</p> <p>Using simple time periods, I can give a good estimate of how long a journey should take, based on my knowledge of the link between time, speed and distance. MNU 2-10c</p>
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Assessment Milestones A (25 Questions)	Assessment Milestones B (25 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can read and record both 12 hour and 24-hour notation. 3) I can interpret a range of electronic timetables and calendars to plan an event or activity. 	<ol style="list-style-type: none"> 2) I know the relationship between commonly used units of time and can carry out simple conversion calculations between hours, minutes and seconds, for example changing $1\frac{3}{4}$ hours into minutes. 3) I can calculate start time, end time or duration from a range of electronic timetables and calendars. 3) I know that a decade is 10 years, a century is 100 years and that a millennium is 1000 years. 4) I can calculate start time, end time or durations of activities and events, including situations bridging across parts of hours using both 12-hour and 24-hour notation. 	<ol style="list-style-type: none"> 2) I can convert between units of time to solve problems. 2) I can convert times into common units, for example 90 minutes = 1.5 hours. 3) I understand what is meant by miles per hour (mph) and kilometres per hour (km/h) and solve simple problems using this. 5) I can calculate the duration (time) when I know the speed and distance. 5) I can estimate the time taken for a journey based on criteria given. 6) I can select appropriate ways that time, speed and distance can be measured. 7) I can choose the most relevant units to record when measuring time, including hundredths of a second 	<ol style="list-style-type: none"> 1) Reads and records time in both 12 hour and 24-hour notation and converts between the two. 2) Knows the relationships between commonly used units of time and carries out simple conversion calculations, for example, changes $1\frac{3}{4}$ hours into minutes. 3) Uses and interprets a range of electronic and paper-based timetables and calendars to plan events or activities and solve real life problems. 4) Calculates durations of activities and events including situations bridging across several hours and parts of hours using both 12-hour clock and 24-hour notation. 5) Estimates the duration of a journey based on knowledge of the link between speed, distance and time. 6) Chooses the most appropriate timing device in practical situations and records using relevant units, including hundredths of a second. 7) Selects the most appropriate unit of time for a given task and justifies choice.

Third/Fourth Level – Time



Coming Soon

Third/Fourth Level – Number, Money and Measure – Powers and Roots



Experience and Outcome	Having explored the notation and vocabulary associated with whole number powers and the advantages of writing numbers in this form, I can evaluate powers of whole numbers mentally or using technology. MTH 3-06a
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Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can evaluate whole number powers. 2) I can use roots and powers in calculations. 	<ol style="list-style-type: none"> 1) I can complete problems that contain powers and roots. 2) I can express whole numbers as powers. 	<ol style="list-style-type: none"> 1) Evaluates whole number powers, for example, $24 = 16$. 2) Expresses whole numbers as powers, for example, $27 = 33$.

Benchmark not currently covered: Explains the notation and uses associated vocabulary appropriately, for example, index, exponent and power. (Discussion)



Experience and Outcome	<p>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</p> <p>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</p>
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Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can demonstrate my understanding of the equal sign as a balance. 2) I can find the missing numbers in number sentences when symbols are used using numbers to at least 20. 	<ol style="list-style-type: none"> 2) I can find the missing numbers in number sentences when symbols are used using numbers to at least 100. 2) I can use a simple function machine for addition and subtraction operations, talking about the input and output. 2) I can apply my understanding of the equals sign as a balance (and knowledge of number facts) to solve simple algebraic problems where a picture is used to represent a number. 	<ol style="list-style-type: none"> 1) I can find the missing numbers in number sentences when symbols are used using numbers to at least 1000. 1) I can apply my 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. 2) I can use a simple function machine for all numerical operations. 	<ol style="list-style-type: none"> 1) Understands and accurately uses the terms 'equal to', 'not equal to', 'less than', 'greater than', and the related symbols ($=$, \neq, $<$, $>$) when comparing quantities. 2) 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, $u + 17 = 30$ and $u \times 6 = 30$.

Second Level – Number, Money and Measure – Expressions and Equations



Experience and Outcome

I can apply my knowledge of number facts to solve problems where an unknown value is represented by a symbol or letter.
MTH 2-15a

Assessment Milestones A (25 Questions)

1) Solve one step equations where the idea of an unknown is introduced with a ? rather than a letter.

Assessment Milestones B (10 Questions)

1) Solves simple algebraic equations with one variable, for example, $a - 30 = 40$ and $4b = 20$.

CfE Benchmark

1) Solves simple algebraic equations with one variable, for example, $a - 30 = 40$ and $4b = 20$.



Experience and Outcome	<p>I can collect like algebraic terms, simplify expressions and evaluate using substitution. MTH 3-14a</p> <p>Having discussed ways to express problems or statements using mathematical language, I can construct, and use appropriate methods to solve, a range of simple equations. MTH 3-15a</p> <p>I can create and evaluate a simple formula representing information contained in a diagram, problem or statement. MTH 3-15b</p>
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Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) Collects like terms, to simplify an algebraic expression. 2) I can evaluate expressions involving one variable using positive and negative numbers. 3) Solves linear equations, for example, $ax \pm b = c$ where a, b, c & x are integers. 4) I can create simple (one step) formulae/expressions/equations to represent information. 5) I can evaluate simple formulas. 	<ol style="list-style-type: none"> 1) Collects like terms, including squared terms, to simplify an algebraic expression. 2) I can evaluate expressions involving two variable using positive and negative numbers. 3) Solves linear equations, for example, $ax \pm b = c$ where a, b and c are integers and x is rational. 4) I can create more complex (two or three step) formulae/expressions/equations to represent information. 5) I can evaluate simple formulas. 	<ol style="list-style-type: none"> 1) Collects like terms, including squared terms, to simplify an algebraic expression. 2) Evaluates expressions involving two variables using both positive and negative numbers. 3) Solves linear equations, for example, $ax \pm b = c$ where a, b and c are integers. 4) Creates a simple linear formula representing information contained in a diagram, problem or statement. 5) Evaluates a simple formula, for example, $C = 0.05m + 75$.

Second Level – Number, Money and Measure – Multiples and Factors



Experience and Outcome

Having explored the patterns and relationships in multiplication and division, I can investigate and identify the multiples and factors of numbers.
MTH 2-05a

Assessment Milestones A (10 Questions)

- 1) I understand what a multiple of a number is and how to generate a sequence of multiples.
- 1) I can count forwards and backwards to identify multiples.
- 1) I understand what a factor of a number is.
- 1) I can find some of the factors of a given whole number.

Assessment Milestones B (20 Questions)

- 1) I can use known relationships between multiplication and division to find multiples and factor pairs for a given whole number.
- 1) I can find all the factors of any whole number.

CfE Benchmark

- 1) Identifies multiples and factors of whole numbers and applies knowledge and understanding of these when solving relevant problems in number, money and measurement.



Experience and Outcome

I have investigated strategies for identifying common multiples and common factors, explaining my ideas to others, and can apply my understanding to solve related problems. MTH 3-05a

I can apply my understanding of factors to investigate and identify when a number is prime. MTH 3-05b

Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can find the common multiples of a small set of numbers. 1) I can find the common factors of a small set of numbers. 1) I can identify the highest common factor of a set of numbers 2) I can identify the lowest common multiple of a set of numbers. 3) I can define and identify a prime (or a non-prime/ composite) number. 	<ol style="list-style-type: none"> 1) I can solve problems relating to multiples, lowest common multiples and highest common factors. 3) I can identify prime factors. 4) I can solve problems relating to prime numbers. 5) I can express a number as a product of prime factors. 	<ol style="list-style-type: none"> 1) Identifies common multiples, including the lowest common multiple for whole numbers and can explain method used. 2) Identifies common factors, including the highest common factor for whole numbers and can explain method used. 3) Identifies prime numbers to 100 and can explain method used. 4) Solves problems using multiples and factors. 5) Writes a given number as a product of its prime factors.



Experience and Outcome	I have spotted and explored patterns in my own and the wider environment and can copy and continue these and create my own patterns. MTH 0-13a
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Assessment Milestones (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can continue a repeat pattern using shapes and numbers. 2) Recognises language associated with patterns, for example next, before, after. 3) I can find missing numbers on a number within the range of 0 - 20. 3) I can follow simple addition patterns. 3) I can follow simple subtraction patterns. 	<ol style="list-style-type: none"> 1) Copies, continues and creates simple patterns involving objects, shapes and numbers. 2) Explores, recognises and continues simple number patterns. 3) Finds missing numbers on a number line within the range 0-20.

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.



First Level – Number, Money and Measure – Patterns and Relationships

Experience and Outcome	<p>I can continue and devise more involved repeating patterns or designs, using a variety of media. MTH 1-13a</p> <p>Through exploring number patterns, I can recognise and continue simple number sequences and can explain the rule I have applied. MTH 1-13b</p> <p>Through exploring number patterns, I can recognise and continue simple number sequences and can explain the rule I have applied. MTH 1-13b</p>
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Assessment Milestones A (15 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (15 Questions – Coming Soon)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can count forwards and backwards in 2s, 5s and 10s within 100 starting from a multiple of 10. 2) I can find number patterns using addition and subtraction using number lines. 3) I can continue repeating patterns and sequences. 4) I can recognise and continue odd and even number sequences. 	<ol style="list-style-type: none"> 1) I can count forwards and backwards in 2s, 5s and 10s within 500 starting from any given number. 1) I can skip count in jumps of 2, 5 and 10. 2) I can count in 2s, 5s and 10s using a number square and counters on screen to help me find patterns. 4) I can double numbers to continue a given number sequence. 	<ol style="list-style-type: none"> 1) I can count forwards and backwards in 2s, 5s and 10s to at least 1000 starting from any given number. 1) I can recognise and continue number sequences up to 1000. 2) I can see patterns in number using my knowledge of some multiplication tables. 2) I can link number sequences in multiplication, for example 4, 8, 12, 16. 3) I can recognise, continue and explain the rule for simple number sequences. 4) I can halve numbers to continue a given number sequence. 4) I can skip count using my knowledge of multiples. 	<ol style="list-style-type: none"> 1) Counts forwards and backwards in 2s, 5s and 10s from any whole number up to 1000. 2) Describes patterns in number, for example, in the multiplication tables and hundred square. 3) Continues and creates repeating patterns involving shapes, pictures and symbols. 4) Describes, continues and creates number patterns using addition, subtraction, doubling, halving, counting in jumps (skip counting) and known multiples.

Second Level – Number, Money and Measure – Patterns and Relationships



Experience and Outcome

Having explored more complex number sequences, including well-known named number patterns, I can explain the rule used to generate the sequence, and apply it to extend the pattern. **MTH 2-13a**

Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can continue a sequence using a rule explained in words, for example starting at 3 and adding 4. 1) I can find a missing number in a simple sequence. 	<ol style="list-style-type: none"> 1) I can find the rule to a more complex sequence. 1) I can find a missing number in a complex sequence. 2) I can apply knowledge of multiples, factors, square numbers and triangular numbers to generate number patterns for others to continue. 	<ol style="list-style-type: none"> 1) I can investigate and understand common sequences, for example Fibonacci, square numbers, triangular numbers. 2) I can apply knowledge of multiples, factors, square numbers and triangular numbers to generate number patterns for others to continue. 	<ol style="list-style-type: none"> 1) Explains and uses a rule to extend well known number sequences including square numbers, triangular numbers and Fibonacci sequence. 2) Applies knowledge of multiples, square numbers and triangular numbers to generate number patterns.



Experience and Outcome Having explored number sequences, I can establish the set of numbers generated by a given rule and determine a rule for a given sequence, expressing it using appropriate notation. **MTH 3-13a**

Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can generate sequences from rules. 2) I can extend a pattern and describe a rule. 3) I can express algebraic notation. 	<ol style="list-style-type: none"> 1) I can generate sequences from rules. 2) I can extend a pattern and describe a rule. 3) I can express algebraic notation. 	<ol style="list-style-type: none"> 1) Generates number sequences from a given rule, for example, $T = 4n + 6$. 2) Extends a given pattern and describes the rule. 3) Expresses sequence rules in algebraic notation, for example, the cost of hiring a car is £75 plus a charge of £0.05 per mile, 'm' driven, $C = 0.05m + 75$.

Early Level – Shape, Position and Movement – Properties of 2D Shape and 3D Objects



Experience and Outcome

I enjoy investigating objects and shapes and can sort, describe and be creative with them. **MTH 0-16a**

Assessment Milestones (5 Questions)

- 1) I can recognise and name 3D objects – cube, cuboid, cylinder, sphere and cone.
- 1) I can describe 2D shapes.
- 1) I can sort 2D shapes and 3D objects into groups.
- 1) I can recognise the terms straight, round, flat, curved, rolls, stacks, solid to describe and sort 2D shapes and 3D objects.

CfE Benchmark

- 1) Recognises, describes and sorts common 2D shapes and 3D objects according to various criteria, for example, straight, round, flat and curved.

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.

First Level – Shape, Position and Movement – 2D Shape and 3D Objects



Experience and Outcome

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**

Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can identify and name 2D shapes and 3D objects in different orientations and sizes. 1) I can sort and classify common 2D shapes and everyday 3D objects. 2) I can describe 2D shapes using the terms corners and sides. 2) I can describe 3D objects using faces, corners and sides. 3) I can identify simple 2D shapes within 3D objects. 3) I can recognise 3D objects from 2D drawings. 4) I can investigate 2D shapes that tile. 	<ol style="list-style-type: none"> 1) I can identify and name pentagons, hexagons and octagons. 1) I can identify and name triangular prisms and square based pyramids. 1) I can identify the composition of 3D objects using my knowledge of 2D shapes. 3) I can recognise 3D objects from 2D drawings. 	<ol style="list-style-type: none"> 1) I can identify and name simple quadrilaterals, for example rhombus, kite and trapezium. 1) I can describe 2D shapes using the terms edges and vertices. 1) I can measure the perimeter of 2D shapes. 2) I can describe 3D objects using the terms faces, edges, vertices and base. 2) I can identify right angles in well-known 2D shapes. 	<ol style="list-style-type: none"> 1) Names, identifies and classifies a range of simple 2D shapes and 3D objects and recognises these shapes in different orientations and sizes. 2) 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. 3) Identifies 2D shapes within 3D objects and recognises 3D objects from 2D drawings. 4) Identifies examples of tiling in the environment and applies knowledge of the features of 2D shapes to create tiling patterns incorporating two different shapes.

Second Level – Shape, Position and Movement – 2D Shape and 3D Objects



Experience and Outcome Having explored a range of 3D objects and 2D shapes, I can use mathematical language to describe their properties, and through investigation can discuss where and why particular shapes are used in the environment. **MTH 2-16a**
 I can draw 2D shapes and make representations of 3D objects using an appropriate range of methods and efficient use of resources. **MTH 2-16c**

Assessment Milestones A (20 Questions)	Assessment Milestones B (20 Questions)	Assessment Milestones C (10 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I can name and identify properties of right angled and equilateral triangles. 1) I can name and classify 2D shapes and 3D objects and describe their properties using appropriate vocabulary including face, edge, vertex and angle. 1) I can identify a 3D object from a net. 1) I understand that a regular polygon is equiangular (all angles are equal in measure) and equilateral (all sides have the same length). 2) I can identify how and where 3D objects are used in the environment. 	<ul style="list-style-type: none"> 1) I can name and identify properties of right-angled, isosceles, equilateral and scalene triangles. 1) I can identify the parts of a circle including the terms radius, diameter and circumference. 1) I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles. 	<ul style="list-style-type: none"> 1) I can recognise and name common quadrilaterals and describe their properties. 1) I can understand the term diagonal and investigate the number of diagonals in a range of 2D shapes. 2) I can identify and describe 2D shapes and 3D objects within the environment and explain why their properties match their function, for example, the importance of triangles in a bridge structure. 3) I know that the radius is half of the diameter and can use this knowledge when working with circles. 4) I understand that there are instances when not all parts of the 3D object can be seen. 	<ul style="list-style-type: none"> 1) Describes 3D objects and 2D shapes using specific vocabulary including regular, irregular, diagonal, radius, diameter and circumference. Applies this knowledge to demonstrate understanding of the relationship between 3D objects and their nets. 2) Identifies and describes 3D objects and 2D shapes within the environment and explains why their properties match their function. 3) Knows that the radius is half of the diameter. 4) Uses digital technologies and mathematical instruments to draw 2D shapes and make representations of 3D objects, understanding that not all parts of the 3D object can be seen.

E&O not currently covered: Through practical activities, I can show my understanding of the relationship between 3D objects and their nets. **MTH 2-16b**

This is a practical experience, however elements of it are covered within Sumdog.

Benchmark not currently covered: Uses digital technologies and mathematical instruments to draw 2D shapes and make representations of 3D objects, understanding that not all parts of the 3D object can be seen.

This is a practical activity, however elements of it are covered within Sumdog.

Third/Fourth Level – Shape, Position and Movement – 2D Shape and 3D Objects



Experience and Outcome Having investigated a range of methods, I can accurately draw 2D shapes using appropriate mathematical instruments and methods. **MTH 3-16a**

Assessment Milestones A (10 Questions) – Coming Soon	Assessment Milestones B (10 Questions) – Coming Soon	CfE Benchmark
<p>1) I can use the formulae $r = \frac{1}{2}d$ and $d = 2r$ when calculating the radius and diameter.</p>	<p>1) I can use the formulae $r = \frac{1}{2}d$ and $d = 2r$ when calculating the radius and diameter.</p>	<p>1) Demonstrates a variety of methods to accurately draw 2D shapes, including triangles and regular polygons (given the interior angle), using mathematical instruments.</p>

Benchmark not currently covered: This benchmark is only partially covered, as it refers to using practical mathematical instruments to draw 2D shapes.



Experience and Outcome	In movement, games, and using technology I can use simple directions and describe positions. MTH 0-17a I have had fun creating a range of symmetrical pictures and patterns using a range of media. MTH 0-19a
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Assessment Milestones (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can find an object from given directions. 2) I can recognise when a shape is symmetrical with at least one line of symmetry. 2) I can identify some simple symmetrical shapes/pictures. 	<ol style="list-style-type: none"> 1) Understands and correctly uses the language of position and direction, including in front, behind, above, below, left, right, forwards and backwards, to solve simple problems in movement games. 2) Identifies, describes and creates symmetrical pictures with one line of symmetry.

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.

First Level – Shape, Position and Movement – Angle, symmetry and transformation.



Experience and Outcome	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 1-19a

Assessment Milestones A (5 Questions)	Assessment Milestones B (5 Questions)	Assessment Milestones C (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can use positional vocabulary such as left and right, backwards and forwards, up and down. 7) I can investigate symmetry in simple 2D shapes. 7) I can find one line of symmetry in 2D shapes. 7) I can identify the missing half of a symmetrical pattern or shape. 	<ol style="list-style-type: none"> 2) I can recognise a right angle and know that a right angle is 90°. 3) I can understand directions for turning through angles including full turn, half turn, quarter turn, clockwise, anticlockwise, right turn, left turn, right angle. 4) I can use informal methods to estimate and measure whether angles are greater or less than 90°. 5) I can find right angles in my environment and in 2D shapes. 6) I can identify coordinates on a grid 7) I can complete a symmetrical pattern, design or shape with more than one line of symmetry. 	<ol style="list-style-type: none"> 3) I can follow and give directions using the names of 4 compass points. 3) I can recognise the names of the 4 compass points and relate them to the appropriate angles. 4) I can compare the size of angles. 7) I can find 2 lines of symmetry on shapes. 	<ol style="list-style-type: none"> 1) 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 turn, left turn, right angle. 2) Knows that a right angle is 90°. 3) Knows and uses the compass points, North, South, East and West. 4) Uses informal methods to estimate, compare and describe the size of angles in relation to a right angle. 5) Finds right angles in the environment and in well-known 2D shapes. 6) Describes, plots and uses accurate two figure grid references, demonstrating knowledge of the horizontal and vertical location. 7) Identifies symmetry in patterns, pictures, nature and 2D shapes.

Benchmark not currently covered: Creates symmetrical pictures and designs with more than one line of symmetry. (Practical activity).
Identifies where and why grid references are used. (Discussion activity)



Experience and Outcome

I have investigated angles in the environment, and can discuss, describe and classify angles using appropriate mathematical vocabulary. **MTH 2-17a**

I can accurately measure and draw angles using appropriate equipment, applying my skills to problems in context. **MTH 2-17b**

Through practical activities which include the use of technology, I have developed my understanding of the link between compass points and angles and can describe, follow and record directions, routes and journeys using appropriate vocabulary. **MTH 2-17c**

Having investigated where, why and how scale is used and expressed, I can apply my understanding to interpret simple models, maps and plans. **MTH 2-17d**

I can use my knowledge of the coordinate system to plot and describe the location of a point on a grid. **MTH 2-18a**

I can illustrate the lines of symmetry for a range of 2D shapes and apply my understanding to create and complete symmetrical pictures and patterns. **MTH 2-19a**

Assessment Milestones A (20 Questions)	Assessment Milestones B (20 Questions)	Assessment Milestones C (15 Questions)	CfE Benchmark
<ul style="list-style-type: none"> 1) I know a right angle is 90°, a straight line is 180° and a full turn is 360°. 1) I know an acute angle is less than 90°. 1) I know an obtuse angle is more than 90° but less than 180°. 1) I know a reflex angle is more than 180°, but less than 360°. 2) I can accurately calculate angles up to 180°. 3) I can follow and give directions involving the eight compass points. 3) I can use grid references to read, plot and record locations on a grid 	<ul style="list-style-type: none"> 2) I can calculate measure angles up to 360°. 2) I can calculate missing angle(s) in a triangle. 5) I know the three figure bearings for the eight compass points. 5) I can use my knowledge of the coordinate system to describe the location of a point on a grid. 6) I can identify all lines of symmetry on a wide range of 2D shapes. 	<ul style="list-style-type: none"> 2) I know that supplementary angles add to 180° and can carry out calculations using this knowledge. 2) I know that complementary angles add to 90° and can carry out calculations using this knowledge. 2) I can calculate missing angle(s) in quadrilaterals and regular polygons. 2) I can use my knowledge of angles to solve problems. 5) I can use standard notation to record any 3-figure bearing, for example 060°. 	<ul style="list-style-type: none"> 1) Uses mathematical language including acute, obtuse, straight and reflex to describe and classify a range of angles identified within shapes in the environment. 2) Knows that complementary angles add up to 90° and supplementary angles add up to 180° and uses this knowledge to calculate missing angles. 3) Uses knowledge of the link between the eight compass points and angles to describe, follow and record directions.



- 5) I know the eight compass points.
- 6) I can identify lines of up to 4 lines of symmetry on 2D shapes.
- 6) I can complete symmetrical shapes and patterns with and without digital technology.

- 4) Interprets maps, models or plans with simple scales, for example, 1 cm : 2 km.
- 5) Describes, plots and records the location of a point, in the first quadrant, using coordinate notation.
- 6) Identifies and illustrates line symmetry on a wide range of 2D shapes and applies this understanding to complete a range of symmetrical patterns, with and without the use of digital technologies.

Benchmark not currently covered: Measures and draws a range of angles to within 2° (Practical Activity)



Experience and Outcome

I can name angles and find their sizes using my knowledge of the properties of a range of 2D shapes and the angle properties associated with intersecting and parallel lines. **MTH 3-17a**

Having investigated navigation in the world, I can apply my understanding of bearings and scale to interpret maps and plans and create accurate plans, and scale drawings of routes and journeys. **MTH 3-17b**

I can apply my understanding of scale when enlarging or reducing pictures and shapes, using different methods, including technology. **MTH 3-17c**

I can use my knowledge of the coordinate system to plot and describe the location of a point on a grid. **MTH 3-18a**

I can illustrate the lines of symmetry for a range of 2D shapes and apply my understanding to create and complete symmetrical pictures and patterns. **MTH 3-19a**

Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can name angles using appropriate notation. 2) I know that the angles around a point add to 360° and find missing angles. 3) I know that the sum of the 3 angles of a triangle add to 180° and find missing angles. 4) I can use a scale factor to enlarge a picture or shape. 5) I can read bearings on a map or plan. 5) I can read distance from a scale map or plan. 	<ol style="list-style-type: none"> 2) I understand vertically opposite angles, corresponding angles and alternate angles and can use these to find missing angles. 4) I can create a scale map or plan and record routes or journeys with bearings and distances. 5) I can calculate bearings and distances from a scale map or plan. 5) I understand that a fractional scale factor can create a reduction. 	<ol style="list-style-type: none"> 1) Names angles using mathematical notation. 2) Identifies corresponding, alternate and vertically opposite angles and uses this knowledge to calculate missing angles. 3) Uses the angle properties of triangles and quadrilaterals to find missing angles. 4) Applies knowledge and understanding of scale to enlarge and reduce objects in size showing understanding of linear scale factor. 5) Uses bearings in a navigational context. 6) Identifies all lines of symmetry in 2D shapes. 7) Creates symmetrical patterns and pictures.

Benchmark not currently covered: This benchmark is only partially covered, as it refers to using practical mathematical instruments to draw 2D shapes.



Experience and Outcome	<p>I can collect objects and ask questions to gather information, organising and displaying my findings in different ways. MNU 0-20a</p> <p>I can match objects, and sort using my own and others' criteria, sharing my ideas with others. MNU 0-20b</p> <p>I can use the signs and charts around me for information, helping me plan and make choices and decisions in my daily life. MNU 0-20c</p>
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Assessment Milestones (10 Questions)	CfE Benchmark
<p>1) I can obtain information for a task from a picture, video or story.</p> <p>2/5) I can sort data.</p> <p>3/4) I can interpret simple charts and graphs.</p>	<p>1) Asks simple questions to collect data for a specific purpose.</p> <p>2) Collects and organises objects for a specific purpose.</p> <p>3) Applies counting skills to ask and answer questions and makes relevant choices and decisions based on the data.</p> <p>4) Interprets simple graphs, charts and signs and demonstrates how they support planning, choices and decision making.</p> <p>5) Uses knowledge of colour, shape, size and other properties to match and sort items in a variety of different ways.</p>

Note: At this level children learn through play, exploration and creativity therefore these assessment milestones provide a partial match to the CfE Benchmarks to be used with observations and holistic assessment to determine achievement of the level.

Benchmark not covered: Contributes to concrete or pictorial displays where one object or drawing represents one data value, using digital technologies as appropriate. (Practical Activity)



Experience and Outcome	<p>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</p> <p>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</p> <p>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</p>
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Assessment Milestones A (10 Questions)	Assessment Milestones B (10 Questions)	Assessment Milestones C (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can interpret information from bar graphs and diagrams. 1) I can understand a bar graph, table or diagram using information given. 3) I can total tally marks to represent quantity 	<ol style="list-style-type: none"> 1) I can interpret information from tables and charts. 3) I can understand a table or diagram including relevant labelling. 4) I can work with a bar graph which has a title, two axes labelled, bars evenly spaced etc. 	<ol style="list-style-type: none"> 2) I can use a simple data base to check information.. 	<ol style="list-style-type: none"> 1) Asks and answers questions to extract key information from a variety of data sets including charts, diagrams, bar graphs and tables. 2) Selects and uses the most appropriate way to gather and sort data for a given purpose, for example, a survey, questionnaire or group tallies. 3) 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. 4) Includes a suitable title, simple labelling on both axes and an appropriate scale where one unit represents more than one data value in graphs.

Benchmarks not covered: 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. (Practical Activity) Includes a suitable title, simple labelling on both axes and an appropriate scale where one unit represents more than one data value in graphs. (Practical Activity)

Second Level – Information Handling – Data and Analysis



Experience and Outcome	<p>Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading. MNU 2-20a</p> <p>I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way. MNU 2-20b</p> <p>I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology. MTH 2-21a</p>
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Assessment Milestones A (20 Questions)	Assessment Milestones B (15 Questions)	Assessment Milestones C (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can organise and interpret information using bar graphs, tables and charts. 3) I can use a simple database to extract information. 	<ol style="list-style-type: none"> 2) I can select the best way to collect data 3) I can analyse a simple database. 4) I can draw conclusions from a line graph. 	<ol style="list-style-type: none"> 4) I can understand that data is presented in a variety of ways by the media and it is not always reliable. 	<ol style="list-style-type: none"> 1) Devises ways of collecting data in the most suitable way for the given task. 2) Collects, organises and displays data accurately in a variety of ways including through the use of digital technologies, for example, creating surveys, tables, bar graphs, line graphs, frequency tables, simple pie charts and spreadsheets. 3) Analyses, interprets and draws conclusions from a variety of data. 4) Draws conclusions about the reliability of data taking into account, for example, the author, the audience, the scale and sample size used.

Benchmarks not covered: 5) Displays data appropriately making effective use of technology and chooses a suitable scale when creating graphs. (Practical Activity)



Experience and Outcome	<p>I can work collaboratively, making appropriate use of technology, to source information presented in a range of ways, interpret what it conveys and discuss whether I believe the information to be robust, vague or misleading. MNU 3-20a</p> <p>When analysing information or collecting data of my own, I can use my understanding of how bias may arise and how sample size can affect precision, to ensure that the data allows for fair conclusions to be drawn. MTH 3-20b</p> <p>I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology. MTH 3-21a</p>
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Assessment Milestones A (15 Questions)	Assessment Milestones B (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can find information in text, numerical, pictorial form from a variety of sources. 2) I can make appropriate conclusions from given data. 3) I can describe the trend in data. 	<ol style="list-style-type: none"> 2) I can use compound bar graphs and line graphs and pie charts. 2/4) I can interpret and describe the important features of a data set and whether I believe the information to be robust, vague or misleading. 4) When analysing information or collecting my own data I understand that bias may arise and the sample size can affect precision. 	<ol style="list-style-type: none"> 1) Sources information or collects data making use of digital technology where appropriate. 2) Interprets data sourced or given. 3) Describes trends in data using appropriate language, for example, increasing trend. 4) Determines if information is robust, vague or misleading by considering, for example, the validity of the source, scale used, sample size, method of presentation and appropriateness of how the sample was selected.

Benchmark not currently covered: This benchmark is only partially covered as it contains active and practical elements.

Organises and displays data appropriately in a variety of forms, for example, compound bar and line graphs and pie charts, making effective use of technology as appropriate (Practical Activity)) Collects data by choosing a representative sample to avoid bias. (Practical Activity)

Second Level – Information Handling – Ideas of Chance and Uncertainty



Experience and Outcome

I can conduct simple experiments involving chance and communicate my predictions and findings using the vocabulary of probability. **MNU 2-22a**

Assessment Milestones A (10 Questions) – Coming Soon	Assessment Milestones B (10 Questions) – Coming Soon	Assessment Milestones C (10 Questions)	CfE Benchmark
<ol style="list-style-type: none"> 1) I can use appropriate vocabulary such as highly likely/unlikely etc., to describe the probability of an outcome/event. 2) I can assign a numerical value to the likelihood of the occurrence of simple events on a 5 – point scale. 2) I understand that probability can be represented by a fraction. 2) I understand the concept of equally likely events – ‘equal chance’. 3) I can understand all the possible outcomes of simple events using tree diagrams and organised lists. 	<ol style="list-style-type: none"> 2) I can arrange events in order to determine which is most or least likely to occur. 2) I understand that probability can be represented by a ratio; one in two, one in three and use the notation 1: 6. 3) I can identify 1 as certain and 0 as impossible on the number line. 	<ol style="list-style-type: none"> 1) I can understand the terms favourable outcome and total outcomes. 1) I can describe percentage chance, for example 100% chance, 0% chance, 50% chance. 2) I can place events on a number line to demonstrate the probability of any event. 3) I can use data to predict the outcome of a simple experiment 3) I understand that the more you carry out an experiment, the more confident you can become in predicting the result. 2) I can use a number line from 0 to 1, where 0 is impossible and 1 is certain, to investigate and describe probability. 	<ol style="list-style-type: none"> 1) Uses the language of probability accurately to describe the likelihood of simple events occurring, for example equal chance; fifty-fifty; one in two, two in three; percentage chance; and 1/6. 2) Plans and carries out simple experiments involving chance with repeated trials, for example, ‘what is the probability of throwing a six if you throw a die fifty times?’. 3) Uses data to predict the outcome of a simple experiment.

Third/Fourth Level – Information Handling – Ideas of Chance and Uncertainty



Experience and Outcome

I can find the probability of a simple event happening and explain why the consequences of the event, as well as its probability, should be considered when making choices. **MNU 3-22a**


Assessment Milestones A (10 Questions) – Coming Soon	Assessment Milestones B (10 Questions) – Coming Soon	CfE Benchmark
<ol style="list-style-type: none"> 1) I understand that probability is the measure of how likely an event is (between 0 and 1). 3) I can use a given probability to calculate an expected outcome. 4) I can define probability as the number of favourable outcomes \div the total number of outcomes. 5) I can calculate the probability that an event will/will not happen. 	<ol style="list-style-type: none"> 2) I can make links between the frequency of an event occurring and the probability of the event occurring. 6) I can calculate the expectation of an event, for example, how many times I expect the event to occur in a trial. 5) I can use information collected in the past to make predictions or risk assessments for the future. 	<ol style="list-style-type: none"> 1) Uses the probability scale of 0 to 1 showing probability as a fraction or decimal fraction. 2) Demonstrates understanding of the relationship between the frequency of an event happening and the probability of it happening. 3) Uses a given probability to calculate an expected outcome, for example, 'the probability of rain in June is 0.25 so how many days do we expect it to rain?' 4) Calculates the probability of a simple event happening, for example, 'what is the probability of throwing a prime number on a 12 sided die?' 5) Identifies all of the mutually exclusive outcomes of a single event and calculates the probability of each. 6) Investigates real-life situations which involve making decisions on the likelihood of events occurring and the consequences involved.





Benchmark not currently covered: This benchmark is only partially covered, as it refers to using practical mathematical instruments to draw 2D shapes.



Example Questions

Please note that in these example questions, the green tick indicating the correct answer will not appear on a child's screen when they take the assessment.

2 Which part measures the area of the shape? 

3 The height of a diving board might be...

4km 4m 4mm 4cm

4 Find $66x + 35$ when $x = 0.7$.

36.3 11.2 81.2 2310

5 Find $\frac{1}{4} \cdot 53x$ when $x = \frac{1}{4}$.

$\frac{53}{4}$ $\frac{52}{4}$ $\frac{27}{2}$ -13

6 $20 - 10 = ?$

20 40 21 30

7 2, 4, ?, 8, 10

7 4 6 12

8 

11:00 10:00 8:00 9:00



Reporting

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← "P4 test" - summary assessment report

Participation

Your assessment was available from June 6 - 10.

■ Completed
■ Started
■ Not started

Distribution of scores

Out of 20 questions:

17 - 20	3	🟢🟢🟢
13 - 16	9	🟡🟡🟡🟡🟡🟡🟡
9 - 12	13	🟡🟡🟡🟡🟡🟡🟡🟡
5 - 8	3	🟡🟡🟡
0 - 4	2	🔴🔴
Incomplete	4	🔴🔴🔴🔴

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Highest and lowest scores

These are the students with the highest scores:

Islay	20
Adam	19
Shaida	17
Daniel	13
Margarita	13

These are the students with the lowest scores:

James A	10
Amanda	7
Nicholetta	7
Gillian	4
Simon	4

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Most challenging questions

Questions with the lowest number of students answering correctly, among those who have completed the assessment

- 11** MTH 1-13b Through exploring number patterns, I can recognise and continue simple number... 4 20 6
- 19** MNV 1-01a (24) - Multiplication 6 times table 7 21 3

$6 \times 9 = ?$

63	45	54	60	Not answered
5	16	7	0	2
Gemma, Margaret, Michael, Quan, Sanjay	Amanda, Carlos, Consuelo, Gillian, James A, James R, Ji, Minesh, Mohamed, Nicholetta, Paul, Saul, Simon, Tracey, Valerie, Vince	Adam, Daniel, Gerald, Islay, Margarita, Robert, Shaida		Philip, Susan

- 6** MNV 1-20a I have explored a variety of ways in which data is presented and can answer... 7 20 3
- 5** MTH 1-21a Using technology and other methods, I can display data simply, clearly... 9 21
- 8** MTH 1-07c I can demonstrate my understanding of simple fractions which are... 13 16

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