

# **Numeracy and Mathematics**

## **Broad General Education Progression**

**Aberdeen City Council  
Education and Children's Services**

**February 2017 Draft**



# Introduction

From the beginning of the 2016/2017 session, a committee of Primary and Secondary teachers have explored the pedagogy behind the draft Benchmarks for Numeracy and Mathematics, focusing upon the developmental process necessary to allow our learners to achieve a level.

This planner has been designed by triangulating the information from the National Numeracy and Mathematics Progression Framework, Experience and Outcomes from Curriculum for Excellence and the draft Benchmarks for Numeracy and Mathematics. This process was complemented by the development of our Aberdeen City Council Numeracy and Mathematics Progressive Vocabulary Booklet.

This planner is designed to complement prior work completed by many schools across the authority and it should not replace your current planning documents if you do not wish it to. Schools wishing to continue using their current planners will benefit from moderating their own in line with the content of the Numeracy and Mathematics Broad General Education Progression to ensure consistency across the authority.

Please note that the Numeracy and Mathematics Broad General Education Progression is in its final draft format. Changes may still be necessary after the consultation on the draft Benchmarks for Numeracy and Mathematics ends, prior to being published in June. Feedback on the document is welcomed and a process to receive feedback has been set up.


I hope that the content of the progression supports your teaching of Numeracy and Mathematics.


**Mark Aitchison**


Numeracy and Mathematics Education Support Officer

# Aberdeen City Council Numeracy and Mathematics Progression Pathway

Curriculum Organiser		Numeracy: Estimation and Rounding		
<div> <div>Awareness of size and amount</div> <div>Concept of estimation</div> <div>Concept of rounding</div> <div>Accuracy within rounding</div> <div>Tolerance</div> </div>				
<b>EARLY LEVEL</b>		<b>FIRST LEVEL</b>		<b>SECOND LEVEL</b>
estimate nearly, roughly, close to about the same as just over, just under too many, too few enough not enough		exact, exactly round, nearest, round to nearest 10		approximate, approximately round to the nearest hundred round to the nearest thousand round to the nearest tenth one decimal place round to the nearest hundredth two decimal places
<b>THIRD LEVEL</b>		<b>FOURTH LEVEL</b>		
round to the nearest thousandth three decimal places round to three significant figures		tolerance		

Curriculum Organiser	Number, Money and Measure – Estimation and Rounding		
Milestone/s	Awareness of Size and Amount		
EARLY LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through Early Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level	
			
<ul style="list-style-type: none"><li>• I can estimate with some accuracy within 5.</li><li>• I can check estimate by counting.</li><li>• I can recognise number of objects without counting within 5.</li></ul>		<ul style="list-style-type: none"><li>• I can estimate with some accuracy to at least 20.</li><li>• I can check estimate by counting.</li><li>• I can recognise number of objects without counting (up to at least 20).</li><li>• I can estimate an object's length using non-standard units with some accuracy.</li><li>• I can estimate an object's capacity using non-standard units with some accuracy.</li><li>• I can estimate an object's weight using non-standard units with some accuracy.</li><li>• I can begin to understand where numbers are in relation to one another, for example 3 is smaller than 5 or 6 is nearer to 10 than 0.</li><li>• I can estimate in the contexts of number, money, time and measure using relevant vocabulary, for example, 'less than', 'longer than'.</li><li>• I know and can show understanding of what the terms estimate and estimating means.</li></ul>	
		<ul style="list-style-type: none"><li>• Identifies the amount of objects in a group and uses this information to estimate the amount of objects in a larger group.</li><li>• Checks estimates by counting.</li><li>• Demonstrates skills of estimation in the contexts of number, money, time and measure using relevant vocabulary, for example, 'less than', 'longer than'.</li></ul>	

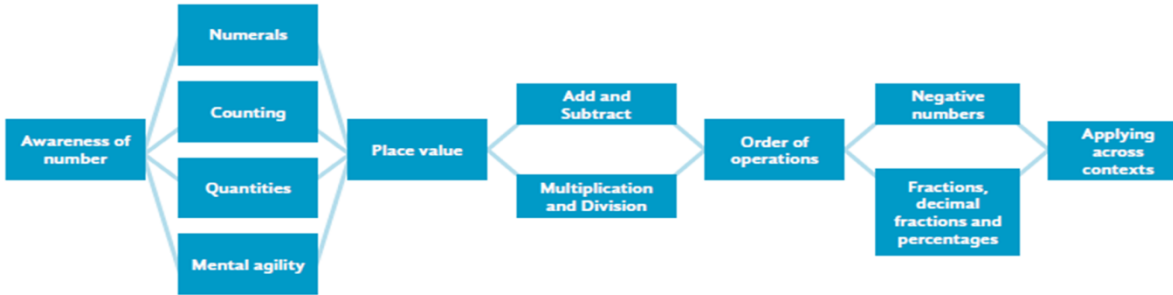
Curriculum Organiser	Number, Money and Measure – Estimation and Rounding		
Milestone/s	Concept of Estimation; Concept of Rounding		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can share ideas with others to develop ways of estimating the answer to a calculation or problem, work out the actual answer, then check my solution by comparing it with the estimate. MNU 1-01a		
Progression Through First Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can estimate quantities up to at least 20.</li><li>• I can estimate the position of any number up to at least 20 on a number line/square.</li><li>• I can round numbers to the nearest ten using number lines.</li><li>• I can use rounding skills to check answers.</li></ul>	<ul style="list-style-type: none"><li>• I can estimate quantities up to 50.</li><li>• I can estimate the position of any number up to 50 on a number line/square.</li><li>• I can round numbers to the nearest 10 and 100 using number lines or squares.</li><li>• I can use rounding skills to check answers.</li><li>• I can show my understanding of the rule for rounding involving half way between, for example 5 and above is rounded up, below 5 is rounded down.</li></ul>	<ul style="list-style-type: none"><li>• I can estimate quantities up to 100.</li><li>• I can estimate the position of any number up to 100 on a number line.</li><li>• I can round whole numbers to nearest ten, hundreds and thousands.</li><li>• I can use rounding skills to estimate.</li><li>• I can use rounding skills to check answers.</li><li>• I can select strategies I have learned to solve problems (i.e doubling etc).</li><li>• I can explain how I have solved a problem using my skills in estimating and rounding.</li></ul>	<ul style="list-style-type: none"><li>• Uses different strategies to estimate an answer to a calculation or problem, for example, doubling.</li><li>• Checks the reasonableness of calculations by comparing the final solution with the estimate.</li><li>• Rounds whole numbers to at least the nearest 10 and 100 and uses this skill routinely to estimate and check the reasonableness of a solution.</li></ul>

Curriculum Organiser	Number, Money and Measure – Estimation and Rounding		
Milestone/s	Concept of Rounding; Accuracy within Rounding		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through Second Level 			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<ul style="list-style-type: none"><li>• I can round 3 digit whole numbers to nearest ten.</li><li>• I can round 3 digit whole numbers to nearest hundred.</li><li>• I can use rounding skills to estimate.</li><li>• I can use rounding skills to check answers.</li><li>• I can use knowledge of estimation and rounding within a range of problem solving contexts including money or measure.</li></ul>	<ul style="list-style-type: none"><li>• I can round 4 digit whole numbers to the nearest thousand, hundred and ten.</li><li>• I can round decimal numbers to the nearest whole number.</li><li>• I can round numbers to 1 and 2 decimal places using a number line.</li><li>• I can use rounding skills to estimate.</li><li>• I can use rounding skills to check answers.</li><li>• I can use knowledge of estimation and rounding within a range of problem solving contexts including money or measure.</li></ul>	<ul style="list-style-type: none"><li>• I can round decimals up to at least 2 decimal places.</li><li>• I can round numbers larger than 4 digits and use in calculations to estimate answers then check against accurate calculations.</li><li>• I can use knowledge of estimation and rounding within a range of problem solving contexts including money or measure.</li><li>• I can show my understanding the rule for rounding involving half way between, for example 0.5 and above is rounded up, below 0.5 is rounded down.</li></ul>	<ul style="list-style-type: none"><li>• Rounds whole numbers and decimal fractions up to and including at least 2 decimal places.</li><li>• Applies knowledge of rounding to give an estimate to a calculation appropriate to the context, and uses it to check the reasonableness of the solution.</li><li>• Shares solutions with others.</li></ul>

Curriculum Organiser	Number, Money and Measure – Estimation and Rounding	
Milestone/s	Accuracy within Rounding	
THIRD LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	I can round a number using an appropriate degree of accuracy, having taken into account the context of the problem. MNU 3-01a	
Progression Through Third Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>		

Curriculum Organiser	Number, Money and Measure – Estimation and Rounding	
Milestone/s	Tolerance	
FOURTH LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	Having investigated the practical impact of inaccuracy and error, I can use my knowledge of tolerance when choosing the required degree of accuracy to make real-life calculations. MNU 4-01a	
Progression Through Fourth Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div></div>		<div></div>



Curriculum Organiser	Numeracy: Number and Number Processes		
			
EARLY LEVEL	FIRST LEVEL		SECOND LEVEL
the same number as, as many as greater, more, larger, bigger less, least, fewer, fewest, smaller, smallest greatest, most, bigger, largest one/two more, one/two less greater than, lesser than equal to, compare, order, size first, second, third... tenth last, second last, before, after next, between, above, below	one (units), digit      ten more, ten less, tens exchange      'teens' number eleventh, twentieth, thirtieth...      twenty-first half way between      hundreds one-two-three digit number place, place value stands for      represents rounding, rounds to, nearest 10 one hundred more, less		thousands, ten thousands, hundred thousands millions nearest hundred, thousand nearest tenth, hundredth, thousandth one/two/three decimal places integer, positive, negative above/below, zero, minus greater than, less than, equal to ascending/descending order approximately equal to
THIRD LEVEL	FOURTH LEVEL		
nearest thousandth, three decimal places	Consolidation of...		

Curriculum Organiser	Number, Money and Measure - Number and Number Processes		
Milestone/s	Awareness of number; Numerals; Counting; Quantity; Mental Agility; Place Value; Addition and Subtraction		
EARLY LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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 to understand addition and subtraction, recording my ideas and solutions in different ways. MNU 0-03a		
Progression Through Early Level			Benchmarks to Support Teachers’ Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>			

<ul style="list-style-type: none"> <li>• I can subitise (recognise number quantities at a glance) using regular(e.g. dice, Numicon) and irregular dot patterns, arrays, five frames, ten frames to at least 5</li> <li>• I can use ordinal numbers (1st, 2nd, 3rd) in real life contexts</li> <li>• I understand the terms 'before' and 'after' and 'in between'</li> <li>• I understand the terms 'less than' and 'more than'</li> </ul>	<ul style="list-style-type: none"> <li>• I can subitise (recognise number quantities at a glance) using regular(e.g. dice, Numicon) and irregular dot patterns, arrays, five frames, ten frames to at least 10</li> <li>• Identify the position of an object using ordinal numbers</li> <li>• I can find one more than and one less than on a number line</li> <li>• I can mentally find one more and one less than a number</li> <li>• I can combine two sets of objects to make a total</li> <li>• I can take objects away from a set and find the new total</li> <li>• I can compare groups of objects to find the difference between 2 numbers</li> <li>• I can count on and back in ones to demonstrate and understanding of addition and subtraction</li> <li>• I understand that addition means combining 2 or more groups to find greater total</li> <li>• I understand that subtraction means taking away from a group to reveal a smaller number</li> <li>• I can identify the symbols for adding, subtracting, equals, more than and less than (&gt;, &lt;).</li> <li>• I can use concrete materials and number lines to do addition and subtraction within 5 and then 10</li> <li>• I can create addition and subtraction facts to 10</li> <li>• I can explore all possible partitions of numbers to at least 10, for example 4 can be partitioned into 4+0, 3+1, 2+2, 1+3 and 0+4.</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies 'how many?' in regular and irregular dot patterns, arrays, five frames, ten frames and dice without having to count (subitising).</li> <li>• Uses ordinal numbers in real life contexts, for example, 'I am third in the line', including the language of before, after and in-between.</li> <li>• Counts on and back in ones to demonstrate understanding of addition and subtraction.</li> <li>• 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.</li> <li>• Uses appropriately the mathematical symbols +, -, =.</li> <li>• Demonstrates understanding of all possible partitions of numbers to at least 10, for example 4 can be partitioned into 4+0, 3+1, 2+2, 1+3 and 0+4.</li> <li>• Uses a range of strategies to add and subtract mentally to at least 10.</li> </ul>
---	--	--

<ul style="list-style-type: none"> <li>• I understand that the count does not alter when objects are re-arranged</li> </ul>	<ul style="list-style-type: none"> <li>• I understand that however I split a group of objects, the total number remains the same</li> <li>• I can partition single digit numbers into two or more parts using concrete materials e.g. <math>3+2=5</math> and <math>1+1+1+2=5</math>.</li> </ul>	<ul style="list-style-type: none"> <li>• Groups items recognising that the appearance of the group has no effect on the overall total (conservation of number).</li> <li>• Partitions single digit numbers into two or more parts and recognises that this does not affect the total, for example, <math>3+2=5</math> and <math>1+1+1+2=5</math>.</li> </ul>
<ul style="list-style-type: none"> <li>• I am beginning to double numbers up to 5 through songs and rhymes</li> </ul>	<ul style="list-style-type: none"> <li>• I can double up to at least 20 e.g. <math>10+10</math></li> <li>• I can explore the relationships within 'number families' using concrete materials e.g. <math>3+5=8</math>, <math>5+3=8</math>, <math>8-3=5</math>, <math>8-5=3</math></li> <li>• I can use strategies to find missing addends e.g. <math>3 + \blacklozenge = 10</math></li> <li>• I can skip count in 10s</li> <li>• I can skip count in 2s</li> <li>• I can skip count in 5s</li> </ul>	<ul style="list-style-type: none"> <li>• Doubles numbers to a total of at least 20 mentally, for example, <math>9 + 9 = 18</math>.</li> <li>• Links 'number families' when explaining mental strategies for addition and subtraction for example <math>3+5=8</math>, <math>5+3=8</math>, <math>8-3=5</math>, <math>8-5=3</math>.</li> <li>• Solves simple missing number sequences for example <math>3 + \blacklozenge = 10</math>.</li> <li>• Counts in jumps (skip counts in 2s, 5s and 10s) and begins to use this as a useful strategy to find how many in a larger group.</li> </ul>


Curriculum Organiser	Number, Money and Measure - Number and Number Processes		
Milestone/s	Counting; Quantity; Mental Agility; Place Value; Addition and Subtraction; Multiplication and Division		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I have investigated how whole numbers are constructed, can understand the importance of zero within the system & can use my knowledge to explain the link between a digit, its place & its value. MNU 1-02a		
Progression Through First Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<ul style="list-style-type: none"><li>• I know the forward number sequence to 100.</li><li>• I know the backward number sequence from 100 to 0</li><li>• I can read and write numbers to 100 in numerals</li><li>• I can order consecutive numbers within 100</li><li>• I can use &lt; and &gt; to compare two numbers within 100</li><li>• I can find missing numbers on a number line or square up to 100</li><li>• I can say how many tens there are in a two digit number, for example six 10s in 67</li><li>• I can say how many ones there are in a two digit number.</li><li>• I can partition a two digit number and say what each digit represents, for example 67 is 60 and 7</li><li>• I can use place value materials to show that I understand the value of the digits in two digit numbers, for example Dienes, Numicon, Tens Frames, Place Value Arrows.</li></ul>	<ul style="list-style-type: none"><li>• I know the forward number sequence to 1000</li><li>• I know the backward number sequence from 1000 to 0</li><li>• I can read and write numbers to 1000 in numerals</li><li>• I can order non-consecutive numbers within 100 (smallest to biggest and biggest to smallest)</li><li>• I understand zero as a placeholder in whole numbers to at least 100</li><li>• I can use place value materials to show that I understand the value of the digits in three digit numbers, for example Dienes, Place Value Arrows.</li></ul>	<ul style="list-style-type: none"><li>• I can order consecutive numbers within 1000 (smallest to biggest and biggest to smallest)</li><li>• I can use &lt; and &gt; to compare two numbers within 1000</li><li>• I can find missing numbers in part of a number line or square up to 1000</li><li>• I can order non-consecutive numbers within 1000 (smallest to biggest and biggest to smallest)</li><li>• I understand zero as a placeholder in whole numbers to at least 1000</li><li>• I can partition a three digit number into thousands, hundreds, tens and ones, identifying the value of each digit.</li></ul>	<ul style="list-style-type: none"><li>• Reads, writes, orders and recites whole numbers up to at least 1000, starting from any number in the sequence.</li><li>• Demonstrates understanding of zero as a placeholder in whole numbers to at least 1000.</li><li>• Identifies the value of each digit in a whole number with up to at least 3 digits.</li></ul>



<ul style="list-style-type: none"> <li>• I understand the relationship between adding and subtracting and can use this knowledge to create 'number families'</li> <li>• I can count in tens forwards and backwards within 100 (multiples of 10)</li> <li>• I can count in twos forwards and backwards within 100</li> <li>• I can make equal groups using practical materials and combine or count them to make a larger number.</li> <li>• I can use array dots to lay out equal groups and use this to calculate the total.</li> <li>• I can use pictorial representations to show equal groups and can use this to calculate the total amount.</li> </ul>	<ul style="list-style-type: none"> <li>• I can carry out an addition calculation to check my subtraction calculation</li> <li>• I can carry out subtraction calculation to check my addition calculation</li> <li>• I can count in tens forwards and backwards within 100 from any number, for example 34, 44, 54, 64...</li> <li>• I can count in 100s up to at least 1000 (multiples of 100)</li> <li>• I can count in fives forwards and backwards within 100</li> <li>• I can multiply a single digit number by 10</li> <li>• I can divide a two digit multiple of 10 by a single digit, for example <math>80 \div 10</math></li> <li>• I know that when we are multiplying we are making groups of a given amount e.g. <math>2 \times 5</math> means 2 groups of 5</li> <li>• I can apply a range of strategies to determine multiplication facts, for example counting in jumps (skip counting), doubling, repeated, repeated addition and arrays – 2, 4 and 8 times tables</li> <li>• I can apply a range of strategies to determine multiplication facts, for example counting in jumps (skip counting), halving, repeated, repeated addition and arrays – 5 and 10 times tables</li> </ul>	<ul style="list-style-type: none"> <li>• I understand the relationship between adding &amp; subtracting and can use this to check written calculations</li> <li>• I can count in 100s up to at least 1000 from any number, for example 135, 235, 335...</li> <li>• I can count in tens forwards and backwards within 1000 from any number, for example 345, 355, 365...</li> <li>• I can multiply a single digit number by 100</li> <li>• I can divide a three digit multiple of 100 by 100, for example <math>600 \div 100</math></li> <li>• I can divide a three digit multiple of 100 by 10, for example <math>400 \div 10</math></li> <li>• I can divide a three digit multiple of 10 by 10, for example <math>560 \div 10</math></li> <li>• I can apply a range of strategies to determine multiplication facts, for example counting in jumps (skip counting), doubling, repeated, repeated addition and arrays – 3, 6 and 9 times tables</li> </ul>	<ul style="list-style-type: none"> <li>• Recognises, explains and uses the connections between addition and subtraction and multiplication and division to complete mental and written calculations.</li> <li>• Checks answers routinely using inverse operations in both mental and written calculations.</li> <li>• Counts forwards and backwards in at least 10s and 100s. Adds at least 10s or 100s to any whole number up to at least 1000.</li> <li>• Solves problems mentally by multiplying and dividing whole numbers by at least 10 and 100 (whole number answers only).</li> <li>• Applies a range of strategies to determine multiplication facts, for example, counting in jumps (skip counting), doubling, repeated addition and arrays.</li> </ul>
--	---	--	---

<ul style="list-style-type: none"> <li>• I can take a larger group of items and share it into equal groups, for example “I have 15 cubes. I need to make 3 equal groups. How many cubes in each group?”</li> <li>• I can split a group of items into smaller equal groups, for example “I have 16 cubes. How many groups of 4 can I make?”</li> </ul>	<ul style="list-style-type: none"> <li>• I can apply a range of strategies to determine division facts, for example repeated subtraction, grouping, arrays and multiplication facts – 2, 4 and 8 times tables</li> <li>• I can apply a range of strategies to determine division facts, for example repeated subtraction, grouping, arrays and multiplication facts – 5 and 10 times tables</li> </ul>	<ul style="list-style-type: none"> <li>• I can apply a range of strategies to determine division facts, for example repeated subtraction, grouping, arrays and multiplication facts – 3, 6 and 9 times tables</li> </ul>	<ul style="list-style-type: none"> <li>• Applies a range of strategies to determine division facts, for example, repeated subtraction, grouping, arrays and multiplication facts.</li> </ul>
<ul style="list-style-type: none"> <li>• I can use the correct mathematical vocabulary when discussing the four operations, for example, subtract, add, sum of, total, multiply, product, divide and shared</li> </ul>			<ul style="list-style-type: none"> <li>• Uses correct mathematical vocabulary when discussing the four operations, for example, subtract, add, sum of, total, multiply, product, divide and shared.</li> </ul>
<ul style="list-style-type: none"> <li>• I can interpret and solve a range of one step word problems when I am told the operation being used</li> </ul>	<ul style="list-style-type: none"> <li>• I can interpret and solve a range of one step word problems when I have to work out the correct operation to complete the calculation.</li> </ul>	<ul style="list-style-type: none"> <li>• I can interpret and solve a range of word problems with more than one step, and applies the correct operations to complete the calculation.</li> </ul>	<ul style="list-style-type: none"> <li>• Interprets a range of word problems, including those with more than one step, and applies the correct operations to complete the calculation.</li> </ul>



Curriculum Organiser	Number, Money and Measure - Number and Number Processes		
Milestone/s	Place Value; Addition and Subtraction; Multiplication and Division; Order of Operations; Negative Numbers; Fractions Decimals and Percentages		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I have extended the range of whole numbers I can work with & having explored how decimal fractions are constructed, can explain the link between a digit, its place & its value. MNU 2-02a		
Progression Through Second Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can count, order, write the forward and backward number sequence up to 10 000.</li><li>• I can place non-consecutive numbers in order of size up to 10 000.</li><li>• I can identify numerals to 10 000.</li><li>• I can partition whole numbers up to 10 000 into tens of thousands, thousands, hundreds, tens and ones.</li><li>• I can read, write and order numbers to 1 decimal place.</li><li>• I can partition decimal fractions with up to at least 1 decimal place.</li><li>• I can use decimals to 1 place in practical measurement, for example 10.1cm.</li><li>• I can understand zero as a placeholder in decimals.</li><li>• I can identify the place value of tenths and hundredths within the context of money and measure.</li></ul>	<ul style="list-style-type: none"><li>• I can count, order, write the forward and backward number sequence up to 100 000.</li><li>• I can place non-consecutive numbers in order of size up to 100 000.</li><li>• I can identify numerals to 100 000.</li><li>• I can partition whole numbers up to 100 000 into hundreds of thousands, tens of thousands, thousands, hundreds, tens and ones.</li><li>• I can read, write and order numbers to 2 decimal places.</li><li>• I can partition decimal fractions with up to at least 2 decimal places.</li><li>• I can use decimals to 2 places in money and practical measurement, for example 10.15m.</li></ul>	<ul style="list-style-type: none"><li>• I can count, order, write the forward and backward number sequence up to 1 000 000.</li><li>• I can place non-consecutive numbers in order of size up to 1 000 000.</li><li>• I can identify numerals 1 000 000.</li><li>• I can partition whole numbers up to 1 000 000 into millions, hundreds of thousands, tens of thousands, thousands, hundreds, tens and ones.</li><li>• I can read, write and order numbers to 3 decimal places.</li><li>• I can partition decimal fractions with up to at least 3 decimal places.</li><li>• I can use decimals to 3 places in practical measurement, for example 10.155km.</li></ul>	<ul style="list-style-type: none"><li>• Reads, writes, and sequences numbers forwards and backwards, using the number range 0 to 1 000 000.</li><li>• Partitions a wide range of whole numbers and decimal fractions with up to at least 3 decimal places, for example, 3.6 is three and six tenths, 3.042 is three and forty-two thousandths.</li><li>• Explains the link between a digit, its place and its value for whole numbers up to at least 1 000 000.</li><li>• Explains the link between a digit, its place and its value for numbers with at least 3 decimal places.</li><li>• Reads, writes, orders and sequences sets of decimal fractions with up to at least 3 decimal places.</li><li>• Recognises where decimal fractions are used in everyday life and applies this knowledge to record and convert amounts in money and measure accurately, for example, 501p = £5.01, 9cm = 0.09m</li></ul>

- I can add and subtract 10, 100 and 100 mentally from whole numbers and decimal fractions (up to 1 decimal place).
- I can mentally add and subtract 2 digit numbers to and from 2 digit numbers using a range of strategies, including an empty number line.
- I can add more than 2 whole numbers with varying number of digits (up to 3 digits), for example  $8 + 124 + 19$ .
- I can carry out expanded method calculations involving addition, for example

$$\begin{array}{r}
 3000 \quad 300 \quad 70 \quad 2 \\
 +2000 \quad 500 \quad 40 \quad 3 \\
 \hline
 5000 \quad 900 \quad 10 \quad 5 = 5915
 \end{array}$$


and subtraction, for example

$$\begin{array}{r}
 2000 \\
 \cancel{3000} \quad 1300 \quad 70 \quad 5 \\
 -1000 \quad 500 \quad 40 \quad 3 \\
 \hline
 1000 \quad 800 \quad 30 \quad 2 = 1832
 \end{array}$$


- I can add and subtract 10, 100 and 100 mentally from whole numbers and decimal fractions (up to 2 decimal place) .
- I can mentally add and subtract 2 digit numbers to & from whole numbers with 3 digits.
- I can add more than 2 whole numbers with varying number of digits (up to 4 digits), for example  $8 + 124 + 19 + 2923$ .
- I can mentally add and subtract 2 digit numbers including decimals, e.g.  $3.4 + 5.7 = 9.1$ .
- I can carry out standard column calculations involving addition and subtraction using whole numbers.
- I can share my knowledge of place value to explain my written calculations.

- I can add and subtract 10, 100 and 100 mentally from whole numbers and decimal fractions (up to 3 decimal place).
- I can carry out standard column calculations involving addition and subtraction using decimal numbers up to 3 decimal places, for example  $13.567 + 34.887$ .

- Adds and subtracts 10, 100 and 1000 mentally to and from whole numbers and decimal fractions with at least 3 decimal places.
- Adds and subtracts multiples of 10 to and from whole numbers and decimal fractions with at least 3 decimal places.

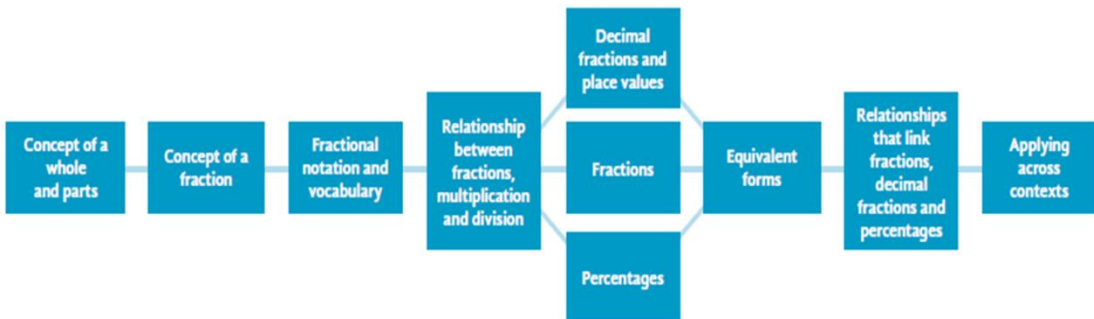
<ul style="list-style-type: none"> <li>• I can multiply and divide whole numbers and decimal fractions (up to 1 decimal place) by 10, 100 and 1000.</li> <li>• I can multiply a multiple of ten by a single digit number, for example <math>50 \times 3</math>.</li> <li>• I can divide a multiple of ten by a single digit using table facts, for example <math>450 \div 9</math>.</li> <li>• I can multiply a two digit number by a single digit number, both mentally and using the grid method.</li> <li>• I can divide a two digit number by a single digit number including remainder.</li> </ul>	<ul style="list-style-type: none"> <li>• I can multiply and divide whole numbers and decimal fractions (up to 2 decimal places) by 10, 100 and 1000.</li> <li>• I can multiply 2 digit whole numbers by multiples of ten, for example <math>25 \times 70</math>.</li> <li>• I can divide up to three digit numbers by multiples of ten, for example <math>360 \div 30</math>.</li> <li>• I can multiply 2 digit by 2 digit numbers using the grid method and other written methods.</li> <li>• I can multiply numbers with up to 1 decimal place by a single digit.</li> <li>• I can use written methods to divide a three digit whole number by a single digit with remainders.</li> </ul>	<ul style="list-style-type: none"> <li>• I can multiply and divide whole numbers and decimal fractions (up to 3 decimal places) by 10, 100 and 1000.</li> <li>• I can multiply whole numbers and decimal fractions with at least 3 decimal places by multiples of 10.</li> <li>• I can apply multiplication strategies including written methods to multiply numbers of more than 2 digits.</li> <li>• I can multiply numbers with more than one decimal place by a single digit</li> <li>• I can divide a two digit number by a single digit, where answers include a decimal fraction, for example <math>78 \div 4 = 19.5</math></li> </ul>	<ul style="list-style-type: none"> <li>• Multiplies and divides whole numbers and decimal fractions with at least 3 decimal places mentally by 10, 100 and 1000.</li> <li>• Multiplies and divides whole numbers and decimal fractions with at least 3 decimal places by multiples of 10.</li> <li>• Provides the answer as a decimal fraction when dividing a whole number by a single digit, for example, <math>3 \div 5 = 8.6</math>.</li> </ul>
<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches & solutions with others. MNU 2-03a I have explored the contexts in which problems involving decimal fractions occur & can solve related problems using a variety of methods. MNU 2-03b		
<b>Progression Through Second Level</b> 			<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>
<ul style="list-style-type: none"> <li>• I can interpret and solve one step problems, show my working and discuss the approach with others.</li> <li>• I can check the reasonableness of my solution using the inverse operation.</li> </ul>	<ul style="list-style-type: none"> <li>• I can interpret and solve two-step problems and share my chosen approach with others.</li> <li>• I can add, subtract, multiply and divide decimal fractions in applications involving money and measurement problem solving contexts up to 2 decimal places.</li> <li>• I can check the reasonableness of my solution using the inverse operations.</li> </ul>	<ul style="list-style-type: none"> <li>• I can independently interpret and solve multi-step problems and share my chosen approach with others.</li> <li>• I can extend my ability to add, subtract, multiply and divide decimal fractions in applications involving money and measurement problem solving contexts up to 3 decimal places.</li> <li>• I can use my knowledge of inverse operations to check solutions.</li> </ul>	<ul style="list-style-type: none"> <li>• Interprets and solves multi-step problems by selecting and carrying out appropriate mental and written calculations, and sharing chosen approach with others.</li> <li>• Uses knowledge of inverse operations in problem solving.</li> </ul>

<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	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		
<div> <div>←</div> <div>Progression Through Second Level</div> <div>→</div> </div>			<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>
<ul style="list-style-type: none"> <li>I know the order of operations and can use them correctly when solving problems.</li> </ul>			<ul style="list-style-type: none"> <li>Applies the correct order of operations in number calculations when solving multi-step problems.</li> </ul>
<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	I can show my understanding of how the number line extends to include numbers less than zero & have investigated how these numbers occur & are used. MNU 2-04a		
<div> <div>←</div> <div>Progression Through Second Level</div> <div>→</div> </div>			<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>
<ul style="list-style-type: none"> <li>I can talk about contexts in which negative numbers can be used in real life contexts, for example, temperature, tides, golf, parking levels</li> </ul>	<ul style="list-style-type: none"> <li>I can locate negative numbers on a number line.</li> <li>I can order negative numbers.</li> </ul>	<ul style="list-style-type: none"> <li>I can mentally add a number to a negative number in real life contexts.</li> <li>I can find the difference between two negative numbers or one positive and one negative number in real life contexts.</li> </ul>	<ul style="list-style-type: none"> <li>Talks about familiar contexts in which negative numbers are used.</li> <li>Locates and orders numbers less than zero.</li> </ul>

<b>Curriculum Organiser</b>	Number, Money and Measure – Number and Number Processes		
<b>Milestone/s</b>	Addition and Subtraction; Multiplication and Division; Order of Operations; Negative Numbers; Fractions, Decimal Fractions and Percentages; Applying across Contexts		
<b><u>THIRD LEVEL</u></b>			
<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	I can use a variety of methods to solve number problems in familiar contexts, clearly communicating my processes and solutions. MNU 3-03a I can continue to recall number facts quickly and use them accurately when making calculations. MNU 3-03b I can use my understanding of numbers less than 0 to solve simple problems in context. MNU 3-04a		
<b><u>FOURTH LEVEL</u></b>			
<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	Having recognised similarities between new problems and problems I have solved before, I can carry out the necessary calculations to solve problems set in unfamiliar contexts. MNU 4-03a I have investigated how introducing brackets to an expression can change the emphasis and can demonstrate my understanding by using the correct order of operations when carrying out calculations. MTH 4-03b		
<b>Progression Through Third and Fourth Level</b>		<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>	
		<b>Third Level</b>	<b>Fourth Level</b>
<ul style="list-style-type: none"> <li>I can recall the 11 times table.</li> <li>I can calculate square powers of 1 to 12.</li> <li>I can solve problems in familiar contexts with whole numbers, negative numbers, decimal fractions with 3 decimal places and show my working.</li> <li>I can justify my process and solutions with others.</li> </ul>		<ul style="list-style-type: none"> <li>I can recall the 12 times table.</li> <li>I know square numbers up to 144.</li> <li>I can solve problems in familiar contexts with whole numbers, negative numbers, decimal fractions with at least three decimal places and show my working.</li> <li>Quickly recalls number facts including at least the 12<sup>th</sup> multiplication tables and square numbers up to 144.</li> <li>Solves written addition and subtraction problems accurately working with whole numbers and decimal fractions with up to at least 3 decimal places and selects and communicates the processes and solutions.</li> </ul>	

<ul style="list-style-type: none"> <li>• I can solve written multiplication problems in familiar contexts working with whole numbers and decimal fractions up to three decimal places.</li> <li>• I can solve written division problems in familiar contexts working with whole numbers and decimal fractions up to three decimal places.</li> <li>• I can use a calculator to solve problems in familiar contexts.</li> <li>• I can mentally solve problems in familiar contexts with whole numbers, negative numbers and decimal fractions using the four operations.</li> <li>• I can interpret and solve multi-step problems in familiar contexts ensuring correct order of operation.</li> <li>• I can share and justify my chosen strategy to solve a given problem.</li> </ul>	<ul style="list-style-type: none"> <li>• I can solve written multiplication problems in familiar contexts working with whole numbers and decimal fractions to at least three decimal places.</li> <li>• I can solve written division problems in familiar contexts working with whole numbers and decimal fractions up to at least three decimal places.</li> <li>• I can apply my knowledge of the order of operations to solve any calculation.</li> <li>• I can apply the correct order of operations in calculations which involve brackets. I can explain my process and solutions when solving calculations which involve brackets.</li> <li>• I can share and justify my chosen strategy, explaining why it's the most effective strategy for the given problem.</li> </ul>	<ul style="list-style-type: none"> <li>• Solves written multiplication and division problems accurately working with whole numbers and decimal fractions up to at least three decimal places.</li> <li>• Solves mental problems accurately involving the four operations.</li> <li>• Interprets and solves multistep problems in familiar contexts, ensuring correct order of operations.</li> <li>• Communicates and justifies strategies used to solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>• Interprets and solves multistep problems using the four operations.</li> <li>• Applies the correct order of operations in calculations which involve brackets and explains process and solutions.</li> <li>• Communicates and justifies use of the most effective strategy for the given task.</li> </ul>
---	--	---	--


# Aberdeen City Council Numeracy and Mathematics Progression Pathway


Curriculum Organiser		Numeracy: Fractions, Decimal Fractions and Percentages	
			
EARLY LEVEL		FIRST LEVEL	SECOND LEVEL
part, equal parts fraction whole half, halves quarter, quarters enough, not enough		numerator/denominator equivalent thirds tenths	fifths, eights, sixths, sevenths ninths, twelfths, twentieths hundredths, thousandths decimal, decimal fraction decimal point, decimal place proper/improper fraction mixed number fraction percentage, percent, % simplify fraction of, ratio proportion
THIRD LEVEL		FOURTH LEVEL	
Consolidation of previous terms at Third Level		comparisons decisions choices percentage increase percentage decrease	


Curriculum Organiser	Number, Money and Measure - Fractions, Decimal Fractions and Percentages		
Milestone/s	Concept of a whole and parts; Concept of a fraction		
EARLY LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can share out a group of items by making smaller groups and can split a whole object into smaller parts. MNU 0-07a		
Progression Through Early Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>			




Curriculum Organiser	Number, Money and Measure - Fractions, Decimal Fractions and Percentages		
Milestone/s	Fractional notation and vocabulary, Relationship between fractions, multiplication and division.		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	Having explored fractions by taking part in practical activities, I can show my understanding of: <ul style="list-style-type: none"><li>• how a single item can be shared equally</li><li>• the notation and vocabulary associated with fractions</li><li>• where simple fractions lie on the number line. MNU 1-07a</li></ul>		
Progression Through First Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>			

<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	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	
<b>Progression Through First Level</b> 		<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>
<ul style="list-style-type: none"> <li>I can find quarters of 1 or 2 digit numbers up to at least 20.</li> <li>I can use my knowledge of division to find simple fractions.</li> </ul>		<ul style="list-style-type: none"> <li>Uses known multiplication and division facts and other strategies to find unit fractions of whole numbers, for example or <math>\frac{1}{2}</math> or <math>\frac{1}{4}</math>.</li> </ul>

<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	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	
<b>Progression Through First Level</b> 		<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>
<ul style="list-style-type: none"> <li>I can recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math> using practical resources.</li> <li>I can recognise the equivalence of <math>\frac{1}{2}</math> and <math>\frac{5}{10}</math> using practical resources.</li> <li>I can recognise the equivalence of <math>\frac{1}{2}</math> and any other simple fraction.</li> </ul>		<ul style="list-style-type: none"> <li>Uses pictorial representations and other models to demonstrate understanding of simple equivalent fractions, for example, <math>\frac{1}{2} = \frac{2}{4} = \frac{3}{6}</math>.</li> <li>Explains the role of the numerator and denominator.</li> </ul>

Curriculum Organiser	Number, Money and Measure - Fractions, Decimal Fractions and Percentages		
Milestone/s	Relationship between fraction, multiplication and division; Decimal fractions and place value; Fractions, Percentages; Equivalent forms, Relationships that link fractions, decimal fractions and percentages		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through Second Level 			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<ul style="list-style-type: none"><li>Know that the numerator is the number on the top of a fraction and shows equal parts.</li><li>Know that the denominator is the number on the bottom of a fraction and shows parts a whole has been split into.</li><li>Understand that the larger the denominator is, the greater the number of parts the whole has been split into.</li></ul> <div><div><ul style="list-style-type: none"><li>I can find fractions, decimal fractions and percentages which relate – <math>\frac{1}{2}</math>, 0.5, 50%.</li><li>I can mentally find basic percentages of whole numbers – 25%, 50%</li></ul></div><div><ul style="list-style-type: none"><li>I can convert given fractions, decimal fractions and percentages.</li><li>I can find percentages of a quantity (100%, 75%, 50%, 25%, 10% and 1%)</li><li>I can calculate % with and without a calculator</li><li>I can find fractions up to 2 digits (<math>\frac{1}{6}</math>, <math>\frac{1}{7}</math>, <math>\frac{1}{8}</math>, <math>\frac{1}{9}</math>).</li></ul></div><div><ul style="list-style-type: none"><li>I can convert given fractions, decimal fractions and percentages to solve problems and justify my choice.</li><li>I can find percentages of a quantity (66.6%, 33.3%, 20% and 5%).</li><li>I can find any fraction of a quantity - <math>\frac{3}{5}</math> of 60.</li><li>I can add and subtract simple fractions with common denominators.</li><li>I can solve problems in recognisable contexts.</li></ul></div></div>			<ul style="list-style-type: none"><li>Calculates simple fractions of a quantity and uses this knowledge to solve problems in everyday contexts, for example, find <math>\frac{3}{5}</math> of 60.</li><li>Uses knowledge of equivalent forms of fractions, decimal fractions and percentages, for example, <math>\frac{3}{4} = 0.75 = 75\%</math>, to solve problems, justifying choice of method used.</li><li>Calculates simple percentages of a quantity, with and without a calculator, and uses this knowledge to solve problems in everyday contexts, for example, calculates the sale price of an item with a discount of 15%.</li></ul>


<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	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		
<b>Progression Through Second Level</b> 			<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>
<ul style="list-style-type: none"> <li>• I understand simple equivalences in fractions.</li> <li>• Is aware that hundredths can be written as a fraction, decimal fraction or a percentage.</li> <li>• I recognize a % symbol relates to number of parts out of 100.</li> </ul>	<ul style="list-style-type: none"> <li>• I can simplify fractions using division.</li> <li>• I can show fractions in their simplest forms.</li> <li>• Can multiply and divide whole numbers and decimal fractions by multiples of 10.</li> </ul>	<ul style="list-style-type: none"> <li>• I can simplify fractions, decimal fractions and percentages and place them on a number line.</li> <li>• I can compare equivalent fractions.</li> <li>• I can recognise equivalence within hundredths</li> </ul>	<ul style="list-style-type: none"> <li>• Creates equivalent fractions and uses this knowledge to put a set of the most commonly used fractions in order.</li> </ul>
<ul style="list-style-type: none"> <li>• I can use the written form of simple fractions – <math>\frac{1}{6}</math>, <math>\frac{1}{7}</math>, <math>\frac{1}{8}</math> and <math>\frac{1}{9}</math>.</li> <li>• I understand that 100% is one whole, 50% is a half and 25% is a quarter.</li> </ul>	<ul style="list-style-type: none"> <li>• I understand 75% is the same as three-quarters.</li> <li>• I understand the relationship between common fractions, percentages and decimal fractions - 100%, 75%, 50%, 25%, 10% and 1%.</li> </ul>	<ul style="list-style-type: none"> <li>• I can identify the relationship between common fractions, percentages and decimal fractions - 66·6%, 33·3%, 20% and 5%.</li> </ul>	<ul style="list-style-type: none"> <li>• Expresses fractions in their simplest form.</li> </ul>
	<ul style="list-style-type: none"> <li>• I can recognise mixed numbers and improper fractions.</li> </ul>		

Curriculum Organiser	Number, Money and Measure - Fractions, Decimal Fractions and Percentages		
Milestone/s	Equivalent forms; Relationships that link fractions, decimal fractions and percentages		
THIRD LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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 By applying my knowledge of equivalent fractions and common multiples, I can add and subtract commonly used fractions. MTH 3-07b Having used practical, pictorial and written methods to develop my understanding, I can convert between whole or mixed numbers and fractions. MTH 3-07c 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		
Progression Through Third Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div></div>			
<ul style="list-style-type: none"><li>• I can multiply and divide fractions.</li><li>• I can convert between whole or mixed numbers, improper fractions and decimal fractions.</li><li>• I can add and subtract fractions and mixed numbers with any denominators.</li><li>• I can convert any fraction, decimal fraction or percentage into a fraction, decimal fraction or percentage.</li><li>• I can increase and decrease quantities proportionally using multiplication and division.</li><li>• I understand the relationship between fractions, proportion and ratio.</li></ul>	<ul style="list-style-type: none"><li>• I can solve problems with a wide range of fractions, decimal fractions and percentages including finding a fraction or percentage of a quantity (with/without a calculator).</li><li>• I can multiply and divide mixed numbers by fractions.</li><li>• I can simplify a ratio.</li><li>• I can share an amount in a given ratio.</li><li>• I can use ratio to solve problems.</li><li>• I can solve simple problems involving direct proportion.</li></ul>	<ul style="list-style-type: none"><li>• Converts any fraction, decimal fraction or percentage into an equivalent fraction, decimal fraction or percentage.</li><li>• Adds and subtracts commonly used fractions including when changing a denominator.</li><li>• Converts between whole or mixed numbers, improper fractions and decimal fractions.</li><li>• Uses knowledge of fractions, decimal fractions and percentages to carry out calculations with or without a calculator.</li><li>• Solves problems in which related quantities are increased or decreased proportionally.</li><li>• 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.</li><li>• Selects and communicates processes and solutions.</li></ul>	


Curriculum Organiser	Number, Money and Measure - Fractions, Decimal Fractions and Percentages	
Milestone/s	Equivalent forms; Relationships that link fractions, decimal fractions and percentages; Applying across contexts	
FOURTH LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	I can choose the most appropriate form of fractions, decimal fractions and percentages to use when making calculations mentally, in written form or using technology, then use my solutions to make comparisons, decisions and choices. MNU 4-07a I can solve problems involving fractions and mixed numbers in context, using addition, subtraction or multiplication. MTH 4-07b Using proportion, I can calculate the change in one quantity caused by a change in a related quantity and solve real-life problems MNU 4-08a	
Progression Through Fourth Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div>&lt;/</div></div>		


# Aberdeen City Council Numeracy and Mathematics Progression Pathway

Curriculum Organiser		Numeracy: Money	
<div><div>Awareness of money</div><div>Coins and notes</div><div>Exchange money for goods</div><div>Money calculations</div><div>Under-standing money in a digital world</div><div>Under-standing risks and rewards</div><div>Analyse the impact of financial decisions</div></div>			
EARLY LEVEL		FIRST LEVEL	
compare double half, halve pair count out, share out, left, left over money, coin, cash, pay, change, penny, pence (p), pound (£), price, cost costs more, costs less, cheaper buy, sell, spend, spent dear, costs more/less/the same as, cheaper how much? how many? total		£ symbol bought, sold, purchase note more/most expensive less/least expensive amount value worth	
THIRD LEVEL		FOURTH LEVEL	
expenditure, best value, budget wages, wage slip, earnings bank cards, credit, debit, debt contactless/online payment, Internet banking ATM gross pay, net pay, deductions overtime, time and a half bonus income economy		Consolidation of previous terms at Fourth Level	
SECOND LEVEL			
		discount currency profit/lost	

Curriculum Organiser	Number, Money and Measure – Money		
Milestone/s	Awareness of money; Coins and notes		
EARLY LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I am developing my awareness of how money is used & can recognise & use a range of coins. MNU 0-09a		
Progression Through Early Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I am developing an awareness of how money is used in real life.</li><li>• I am developing an awareness that coins/money can be exchanged for goods.</li><li>• I understand that different coins have different values.</li><li>• I can recognise the values of some coins.</li><li>• I can make amounts to 10p using 1p coins.</li></ul>			<ul style="list-style-type: none"><li>• Identifies all coins up to at least £1.</li><li>• Applies number skills (addition and subtraction) and uses at least the 1p, 2p, 5p and 10p coins to pay the exact value for items costing up to at least 20p.</li></ul>
<ul style="list-style-type: none"><li>• I can identify all the coins up to at least £1.</li><li>• I can make amounts to 5p using concrete materials or pictures.</li><li>• I can make amounts to 10p using concrete materials or pictures.</li><li>• I can select 1p, 2p, 5p, 10p, coins to buy things (including to pay the exact value for items costing up to at least 20p).</li><li>• I can calculate totals of combinations of 1p, 2p, 5p, 10p coins.</li><li>• I can sort, match &amp; put in order all named coins using the language more than, less than &amp; equal to.</li><li>• I can use money related vocabulary.</li><li>• I can represent amounts to 10p in different ways.</li><li>• I can give change within 10p.</li></ul>			




Curriculum Organiser	Number, Money and Measure – Money		
Milestone/s	Awareness of money, Coins and Notes		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can use money to pay for items & can work out how much change I should receive. MNU 1-09a I have investigated how different combinations of coins & notes can be used to pay for goods or be given in change. MNU 1-09b		
Progression Through First Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can identify and name all coins and notes to £5.</li><li>• I can explore different ways of making the same total up to £5.</li><li>• I can read and write monetary values in pence.</li><li>• I understand the use of the £ and p notation when using money.</li><li>• I can apply mental agility number skills to calculate the total spend up to at least £5.</li><li>• I can work out change from at least £5.</li></ul>	<ul style="list-style-type: none"><li>• I can identify and name all coins and notes to £10.</li><li>• I can explore different ways of making the same total up to £10.</li><li>• I understand the concept of the decimal point in relation to money.</li><li>• I can read and write monetary values including using the appropriate symbols .</li><li>• I can apply mental agility number skills to calculate the total spend up to at least £10.</li><li>• I can work out change from at least £10.</li></ul>	<ul style="list-style-type: none"><li>• I can identify and name coins and notes to at least £20.</li><li>• I can explore different ways of making the same total up to £20.</li><li>• I can record amounts accurately using different ways and correct notation, for example, 149p = £1.49 7p= £0.07.</li><li>• I can apply mental agility number skills to calculate the total spend up to at least £20.</li><li>• I can work out change from at least £20.</li><li>• I can demonstrate an awareness of how goods can be paid for using cards and digital technology.</li></ul>	<ul style="list-style-type: none"><li>• Identifies and uses all coins and notes up to at least £20 and explores different ways of making the same total.</li><li>• Records amounts accurately in different ways using the correct notation, for example, 149p = £1.49 7p= £0.07</li><li>• Uses a variety of coin and note combinations, up to at least £ 20, to pay for items and give change.</li><li>• Applies mental agility number skills to calculate the total spent in a shopping situation and is able to calculate change.</li><li>• Demonstrates awareness of how goods can be paid for using cards and digital technology.</li></ul>

Curriculum Organiser	Number, Money and Measure – Money		
Milestone/s	Money calculations; Understanding money in a digital world; Understanding risks and rewards; Analyse the impact of financial decisions		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can manage money, compare costs from different retailers, and determine what I can afford to buy. MNU 2-09a 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 I can use the terms profit and loss in buying and selling activities and can make simple calculations for this. MNU 2-09c		
Progression Through Second Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can carry out money calculations involving the four operations</li><li>• I can plan purchases within a given budget.</li><li>• I can investigate offers to determine which is most cost effective</li><li>• I can identify the difference between a need and a want</li><li>• I understand the terms profit and loss</li></ul>	<ul style="list-style-type: none"><li>• I can use decimals in the context of money.</li><li>• I can add and subtract monetary values with two decimal points.</li><li>• I can work to a budget to buy certain items, making appropriate decisions within given budgeting constraints.</li><li>• I can find the cost of items and offers from a range of sources/retailers to find the best value</li><li>• I can investigate and discuss payment methods other than cash e.g. bank cards, cheques</li><li>• I can understand the terms credit and debit</li><li>• I can talk about profit and loss in buying and selling activities.</li></ul>	<ul style="list-style-type: none"><li>• I can use decimals and negative numbers in the context of money</li><li>• I can add, subtract, divide and multiply monetary values with two decimal points.</li><li>• I can find the cost of items from a range of sources/retailers to find the best value including calculating discounts, delivery charges etc.</li><li>• I know and use the vocabulary associated with personal banking and understand the use of bank cards.</li><li>• I can investigate debt and how this can mount up when using cards</li><li>• I can calculate simple profit and loss accurately</li></ul>	<ul style="list-style-type: none"><li>• Carries out money calculations involving the four operations.</li><li>• Compares costs and determines affordability within a given budget.</li><li>• Demonstrates understanding of the benefits and risks of using bank cards and digital technologies.</li><li>• Calculates profit and loss accurately, for example, when working with a budget for an enterprise activity.</li></ul>


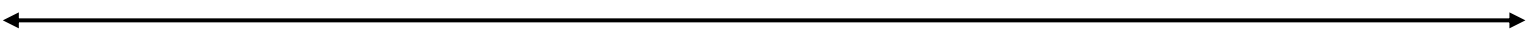
Curriculum Organiser	Number, Money and Measure – Money		
Milestone/s	Understanding money in a digital world; Understanding risks and rewards; Anaylse the impact of financial decisions		
THIRD LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	When considering how to spend 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 I can budget effectively, making use of technology and other methods, to manage money and plan for future expenses. MNU 3-09b		
Progression Through Third Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>			

Curriculum Organiser	Number, Money and Measure – Money		
Milestone/s	Understanding risks and rewards; Analyse the impact of financial decisions		
FOURTH LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can discuss and illustrate the facts I need to consider when determining what I can afford, in order to manage credit and debt and lead a responsible lifestyle. MNU 4-09a I can source information on earnings and deductions and use it when making calculations to determine net income. MNU 4-09b I can research, compare and contrast a range of personal finance products and, after making calculations, explain my preferred choices. MNU 4-09c		
Progression Through Fourth Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div></div>			
<ul style="list-style-type: none"><li>• I know how to read information from wage slips, earnings summaries, budgets etc.</li><li>• I can calculate compound interest</li></ul>	<ul style="list-style-type: none"><li>• I understand the terms credit and debt and I can explain their advantages and disadvantages</li><li>• I understand the vocabulary associated with income e.g. gross, net pay, earnings, deductions, overtime, bonus etc.</li></ul>	<ul style="list-style-type: none"><li>• Applies understanding of credit and debit in relation to earnings and deductions.</li></ul>	
<ul style="list-style-type: none"><li>• I work out the total of monthly/weekly bills</li><li>• I can work out the total income and total expenditure</li></ul>	<ul style="list-style-type: none"><li>• I can calculate income and deductions in order to find gross and net pay</li><li>• I can create a budget taking into account income and expenditure over the short and long term</li><li>• As I plan ahead and budget I can make and explain decisions that lead to a responsible lifestyle</li></ul>	<ul style="list-style-type: none"><li>• Uses budgeting skills to manage income effectively and justifies spending and saving choices.</li><li>• Calculates net income by selecting appropriate information.</li></ul>	
<ul style="list-style-type: none"><li>• I understand the vocabulary of financial products e.g. APR, repayment schemes, mutual etc.</li><li>• I know where to find information on personal financial products (such as savings accounts, loans, insurance, retirement plans, bonds etc.) to source and compare them</li></ul>	<ul style="list-style-type: none"><li>• I can use calculations to determine the differences between financial products e.g. hire purchase and loans/mortgages to make informed decisions to decide which the best product to take is</li><li>• I use a range of factors such as quality, depth of cover, reputation, future earnings, economy and ethical aspects to make my decisions</li></ul>	<ul style="list-style-type: none"><li>• Compares a range of personal finance products.</li><li>• Communicates the impact of financial decisions.</li></ul>	


Curriculum Organiser	Numeracy: Time		
<div><div>Concept of time</div><div><div>Recording and displaying</div><div>Units of time</div><div>Telling the time</div><div>Duration of time</div><div>Calendars</div></div><div><div>Converting units of time</div><div>Time, calculations including more complex durations</div><div>Using appropriate units of time</div></div><div>Time/speed/distance</div><div>Time management</div></div>			
EARLY LEVEL	FIRST LEVEL	SECOND LEVEL	
time, days of the week, day, week birthday, holiday, month, year morning, afternoon, evening, night bedtime, dinnertime, playtime, next, last today, tomorrow, yesterday, before, after now, soon, early, late quick/er/est/ly, slow/er/est/ly old/er/est, new/er/est, longer, less hour, o'clock, half past clock, watch, hands, digital, saesons	weekend, midnight, midday, noon fast, faster, fastest how long ago?... will it be to?... will it take to? often? always, never, often, sometimes, usually months of the year fortnight, minute, second, earliest, latest quarter to/past, five minute intervals, timer digital/analogue clock century, calendar, date am/pm/ 24 hour clock	leap year millennium date of birth timetable arrive/depart convert between 12 hour and 24 hour notation speed/distance/time Greenwich Mean Time British Summer Time International Date Line	
THIRD LEVEL	FOURTH LEVEL		
Consolidation of previous terms at Third Level	Consolidation of previous terms at Fourth Level		


Curriculum Organiser	Number, Money and Measure - Time		
Milestone/s	Concept of time; Recording and displaying; Units of time; Telling the time		
EARLY LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through Early Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can put two daily/personal events in time sequence.</li><li>• I can follow simple routines.</li><li>• I can identify what things I do during the day and what things I do at night.</li><li>• I know that day follows night and night follows day.</li><li>• I can name the days of the week.</li><li>• I can name the seasons and talk about some of the features.</li><li>• I can discuss ways of measuring and recording time for example - clocks, timers, sand timers, watches etc.</li><li>• I know that clocks, watches and digital displays can tell you the time.</li><li>• I can use basic visual timetables.</li><li>• I have seen both analogue clock faces and digital displays and can recognise they both tell the time.</li><li>• When discussing time, I can use the terms before and after appropriately.</li></ul>	<ul style="list-style-type: none"><li>• I can put several events in time sequence.</li><li>• I can name and sequence the days of the week and use language such as before, after, yesterday, tomorrow.</li><li>• I can name and sequence the seasons.</li><li>• I can talk about the features of each season and special events associated with them, for example Christmas, Easter</li><li>• I can name and sequence the months of the year.</li><li>• I can interpret basic visual timetables.</li><li>• I can explore different types of calendars and understand what information they have and why they are helpful.</li><li>• I can read analogue o'clock and half past times (12 hour).</li><li>• I can read digital o'clock and half past times (12 hour).</li><li>• I can represent o'clock and half past times on a digital display or clock face.</li><li>• I know that an analogue clock has an hour hand and a minute hand.</li><li>• I can use time language for example - before, after, o'clock, half past, hour hand and minute hand.</li></ul>	<ul style="list-style-type: none"><li>• Links daily routines and personal events to time sequences.</li><li>• 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.</li><li>• Recognises, talks about, and, where appropriate, engages with everyday devices used to measure or display time, including clocks, calendars, sand timers and visual timetables.</li><li>• Reads analogue and digital o'clock and half past times (12 hour only) and represents these times on a digital display or clock face.</li><li>• Uses appropriate language when discussing time, for example, before, after, o'clock, half past, hour hand and minute hand.</li></ul>	


Curriculum Organiser	Number, Money and Measure - Time		
Milestone/s	Concept of time; Recording and displaying; Units of time; Telling the time; Duration of time; Calendars		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through First Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div></div>			
<ul style="list-style-type: none"><li>• I can tell the time using half and quarter past on analogue and digital 12 hour clocks.</li><li>• I can convert between digital time and analogue displays using half past and quarter past.</li></ul>	<ul style="list-style-type: none"><li>• I can tell the time using quarter to on analogue and digital 12 hour clocks.</li><li>• I can convert between digital and analogue displays using quarter to.</li></ul>	<ul style="list-style-type: none"><li>• I can use analogue and digital 12 hour clocks to tell time in 5 minute intervals or smaller.</li><li>• I know that most analogue clocks show time in increments of 5 minutes.</li><li>• I can convert between digital and analogue displays.</li></ul>	<ul style="list-style-type: none"><li>• Tells the time in 5 minute intervals or smaller intervals using analogue and digital 12 hour clocks.</li></ul>
	<ul style="list-style-type: none"><li>• I understand that am is before midday and pm is after midday.</li><li>• I can record 12 hour times using am and pm correctly within 15 minute intervals.</li></ul>	<ul style="list-style-type: none"><li>• I can identify examples of 24 hour notation in real life examples within 5 minute intervals.</li></ul>	<ul style="list-style-type: none"><li>• Record 12 hour times using am and pm and is able to identify 24 hour notation in real life examples.</li></ul>
<ul style="list-style-type: none"><li>• I can name and sequence the months of the year.</li><li>• I can link months to the appropriate season.</li><li>• I know that 1 year has 12 months.</li><li>• I know that 1 week is 7 days.</li><li>• I understand values of time for example - that seconds are smaller than minutes, and years are longer than months.</li></ul>	<ul style="list-style-type: none"><li>• I know that 1 minute is 60 seconds.</li><li>• I know that 1 hour is 60 minutes.</li><li>• I know the months of the year.</li><li>• I am learning ways of remembering how many days are in each month.</li></ul>	<ul style="list-style-type: none"><li>• I know that 1 day is 24 hours.</li><li>• I know that there is 52 weeks in a year.</li><li>• I know that there is 365 days in a year.</li><li>• I know that there is 366 days in a leap year and why there is a leap year.</li><li>• I know how many days are in each month.</li></ul>	<ul style="list-style-type: none"><li>• 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.</li><li>• Sequences the months of the year and relates these to the appropriate seasons.</li></ul>

<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	I can use a calendar to plan and be organised for key events for myself and my class throughout the year. MNU 1-10b		
<b>Progression Through First Level</b> 			<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>
<ul style="list-style-type: none"> <li>I can place tasks into a daily timetable/diary.</li> </ul>	<ul style="list-style-type: none"> <li>I can record dates on my work using a variety of ways, for example 7th April 2015, 07.04.15 or 7/4/15.</li> <li>I know the ordinal number of the months, for example January is the first month.</li> <li>I can place events into a weekly timetable/diary.</li> <li>I can read a timetable in 12 hour notation.</li> </ul>	<ul style="list-style-type: none"> <li>I can change dates between the full format (7th April 2015) and the short format (07.04.15 or 7/4/15).</li> <li>I can add important events to a calendar for example - birthdays.</li> <li>I can use timetables in 12 hour notation to plan key events.</li> <li>I can use a variety of timetables or calendars to calculate durations.</li> </ul>	<ul style="list-style-type: none"> <li>Records the date in a variety of ways, using words and numbers.</li> <li>Uses and interprets a variety of calendars and 12 hour timetables to plan key events and calculate durations.</li> </ul>
<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	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		
<b>Progression Through First Level</b> 			<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>
<ul style="list-style-type: none"> <li>I am beginning to understand that real life tasks/events may take seconds, minutes or hours.</li> <li>I can compare how long things take, for example break and lunch, and say which takes longer.</li> </ul>	<ul style="list-style-type: none"> <li>I can estimate how many times an activity can be repeated in a period of time, for example star jumps, and use a timer to check the accuracy of my estimate.</li> <li>I can use and select a variety of timers for specific purposes.</li> <li>I have an understanding of how long a second, minute and hour is and what can be done in this time.</li> </ul>	<ul style="list-style-type: none"> <li>I can choose the correct unit of time when making predictions and calculations and justify.</li> </ul>	<ul style="list-style-type: none"> <li>Uses relevant experiences, for example, through practical activities and real life contexts, to estimate time durations in appropriate units of seconds, minutes or hours and then compares estimate with actual measurements.</li> <li>Selects and uses appropriate timers for specific purposes.</li> </ul>

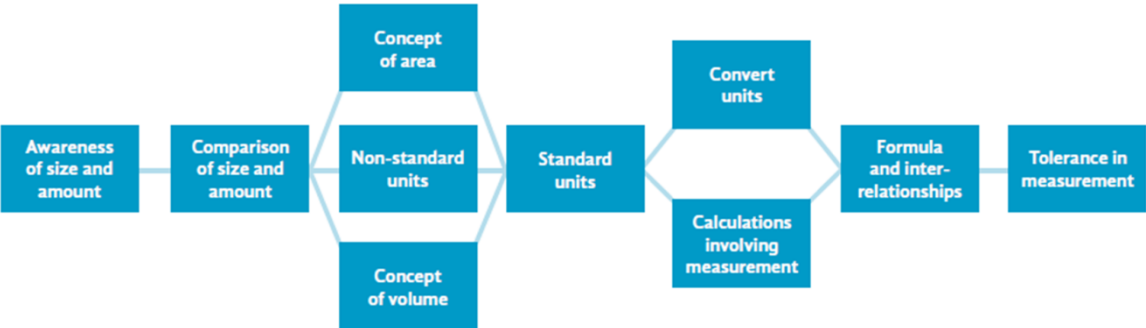


Curriculum Organiser	Number, Money and Measure - Time		
Milestone/s	Units of time, Telling the time; Duration of time; Calendars; Converting units of time; Time calculations including more complex durations; Using appropriate units of time; Time, speed, distance		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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 I can carry out practical tasks and investigations involving timed events and can explain which unit of time would be most appropriate to use. MNU 2-10b		
Progression Through Second Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can discuss the difference between 12 hour and 24 hour notation.</li><li>• I can read and record both 12 hour and 24 hour notation.</li><li>• I can convert between 12 hour and 24 hour notation.</li><li>• I can calculate durations of activities and events, including situations bridging across several hours and using both 12 hour and 24 hour notation.</li><li>• I can use and interpret a range of electronic and paper-based timetables and calendars to plan an event or activity.</li></ul>	<ul style="list-style-type: none"><li>• I can calculate start time, end time or duration from a range of electronic and paper-based timetables and calendars.</li><li>• I can calculate durations of activities and events, including situations bridging across parts of hours using both 12 hour and 24 hour notation.</li><li>• I know the relationship between commonly used units of time.</li><li>• I can carry out simple conversion calculations between hours, minutes and seconds, for example changing <math>1\frac{3}{4}</math> hours into minutes.</li><li>• I know that a decade is 10 years.</li><li>• I know that a century is 100 years.</li><li>• I know that a millennium is 1000 years.</li></ul>	<ul style="list-style-type: none"><li>• I can investigate how long a journey will take using online route planners.</li><li>• I can investigate common units for measuring speed for example - speed limits.</li><li>• I can estimate the time taken for a journey based on criteria given.</li><li>• I can use a stopwatch to calculate metres per second.</li><li>• I can convert between units of time to solve problems.</li><li>• I can choose the most appropriate timing device in practical situations.</li><li>• I can choose the most relevant units to record when measuring time, including hundredths of a second.</li><li>• I can convert times into common units, for example 90 minutes = 1.5 hours.</li></ul>	<ul style="list-style-type: none"><li>• Reads and records any time in both 12 hour and 24 hour notation and converts between the two.</li><li>• Knows the relationships between commonly used units of time and carries out simple conversion calculations, for example, changes <math>1\frac{3}{4}</math> hours into minutes.</li><li>• Uses and interprets a range of electronic and paper-based timetables and calendars to plan events or activities and solve real life problems.</li><li>• Calculates durations of activities and events, including situations bridging across several hours and parts of hours using 12 hour and 24 hour notation.</li><li>• Selects most appropriate unit of time for a given task and justifies choice.</li><li>• Chooses most appropriate timing device in practical situations and records using relevant units, including hundredths of a second.</li></ul>

<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	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	
<b>Progression Through Second Level</b>		<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>
		
<ul style="list-style-type: none"> <li>I can calculate the duration (time) when I know the speed and distance.</li> <li>I understand what is meant by miles per hour (mph) and kilometres per hour (km/h) and solve simple problems using this.</li> <li>I can investigate ways that time, speed and distance can be measured.</li> </ul>		<ul style="list-style-type: none"> <li>Estimates the duration of a journey based on knowledge of the link between speed, distance and time.</li> </ul>

Curriculum Organiser	Number, Money and Measure - Time		
Milestone/s	Time calculations including more complex durations; Time, speed, distance		
THIRD LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	Using simple time periods, I can work out how long a journey will take, the speed travelled at or distance covered, using my knowledge of the link between time, speed and distance. MNU 3-10a		
Progression Through Third Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>I can use the formula which shows the relationship between speed, distance and time to find each of the three variables (whole numbers only).</li></ul>			<ul style="list-style-type: none"><li>Applies knowledge of the relationship between speed, distance and time to find each of the three variables, including working with simple fractional and decimal fractional hours, for example – <math>\frac{1}{2}</math>, <math>0 \cdot 5</math>, <math>\frac{1}{4}</math>, <math>0 \cdot 25</math>, <math>\frac{3}{4}</math>, <math>0 \cdot 75</math>.</li></ul>
<ul style="list-style-type: none"><li>I can convert time into simple fractional and decimal fractional hours, for example <math>\frac{1}{2}</math>, <math>0 \cdot 5</math>, <math>\frac{1}{4}</math>, <math>0 \cdot 25</math>, <math>\frac{3}{4}</math>, <math>0 \cdot 75</math>.</li><li>I can use the correct formula for speed, distance and time to calculate each of the three variables including working with simple fractional and decimal fractional hours, for example <math>\frac{1}{2}</math>, <math>0 \cdot 5</math>, <math>\frac{1}{4}</math>, <math>0 \cdot 25</math>, <math>\frac{3}{4}</math>, <math>0 \cdot 75</math>.</li><li>I can calculate or measure time durations across hours and days.</li></ul>			<ul style="list-style-type: none"><li>Calculate time durations across hours and days.</li></ul>

Curriculum Organiser	Number, Money and Measure - Time		
Milestone/s	Time/speed/distance; Time management		
FOURTH LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can research, compare and contrast aspects of time and time management as they impact on me. MNU 4-10a I can use the link between time, speed and distance to carry out related calculations. MNU 4-10b		
Progression Through Fourth Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div>&lt;</div>			

Curriculum Organiser	Numeracy: Measurement		
	 <pre> graph LR     A[Awareness of size and amount] --&gt; B[Comparison of size and amount]     B --&gt; C[Non-standard units]     C --&gt; D[Standard units]     D --&gt; E[Convert units]     D --&gt; F[Calculations involving measurement]     E --&gt; G[Formula and inter-relationships]     F --&gt; G     G --&gt; H[Tolerance in measurement]     C --- I[Concept of area]     C --- J[Concept of volume]           </pre>		
EARLY LEVEL	FIRST LEVEL	SECOND LEVEL	
measure, size, compare, estimate enough, not enough, too much/little/many/few nearly, close to, about the same as, over, under almost, half, full/empty, holds, container length, width, height, depth, long, short, tall high, low, wide, narrow, deep, shallow, thick, thin long/er/est, short/er/est/, tall/er/est, high/er/est near, far close	roughly, about, approximately scale capacity, volume, measuring cylinder contains, litre (l), half-litre metre, ruler, metre stick further, furthest metre (m), centimetre (cm), millimetres (mm) kilometres (km), mile distance apart, between tape measure	measurement standard, metric, imperial unit millilitre (ml), centilitre (cl), pint, gallon breadth edge, perimeter metric unit, imperial unit circumference feet, foot inches, inch	
THIRD LEVEL	FOURTH LEVEL		
degree of accuracy diameter radius	Consolidation of previous terms at Fourth Level	See Aberdeen City Council Progressive Numeracy and Mathematics Vocabulary Booklet for subject specific vocabulary on: <i>Mass; Area</i> .	


Curriculum Organiser	Number, Money and Measure – Measurement		
Milestone/s	Awareness of Size and Amount; Comparison of Size and Amount; Non-Standard Units/Concept of Area; Concept of Volume		
EARLY LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through Early Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>			


Curriculum Organiser	Number, Money and Measure – Measurement		
Milestone/s	Comparison of Size and Amount; Concept of Area; Concept of Volume; Standard Units; Calculations involving Measurement		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can estimate how long or heavy an object is, or what amount it holds, using everyday things as a guide, then measure or weigh it using appropriate instruments and units. MNU 1-11a I can estimate the area of a shape by counting squares or other methods. MNU 1-11b		
Progression Through First Level			Benchmarks to Support Teachers’ Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div>&lt;/</div></div>			

Curriculum Organiser	Number, Money and Measure – Measurement		
Milestone/s	Concept of Area; Concept of Volume; Standard Units; Convert Units; Calculations involving measurement; Formula and interrelationships		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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 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 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		
Progression Through Second Level			Benchmarks to Support Teachers’ Professional Judgement of Achievement of a Level
<div>←</div> <div>→</div>			
<ul style="list-style-type: none"><li>I can accurately measure and estimate the size and distance of objects using the appropriate tools and units.</li><li>I can estimate the size of familiar objects by comparing them to another object.</li><li>I know the value of units of measure, for example 1000m = 1km, 1000g = 1kg, 10mm = 1cm etc. and can convert between them.</li><li>I can choose the most appropriate measuring device for a given task and can read it accurately.</li></ul>	<ul style="list-style-type: none"><li>I can apply my skills of measuring accurately using appropriate units of measure.</li><li>I can investigate the size of familiar objects and use this knowledge to estimate and accurately compare length, weight, area or capacity.</li><li>I can convert between different units of measure, for example 3·5km = 3500m or 1 metre 25 centimetres = 1·25m</li><li>I can read scales on measuring devices calculating unmarked intervals.</li><li>I know and understand that in everyday life we use imperial units, for example miles or stones.</li></ul>	<ul style="list-style-type: none"><li>I can select appropriate units of measurement to solve problems.</li><li>I can show my understanding of measurement of familiar objects and through problem solving.</li><li>I can record measurements in a variety of ways using decimal notation up to 3 places, for example 550cm = 5·5m or 3·009kg = 3kg 9g.</li></ul>	<ul style="list-style-type: none"><li>Estimates to the nearest appropriate unit, then measures accurately: length, height and perimeter in millimetres (mm), centimetres (cm) and metres (m); distances in kilometres (km); weights in grams (g) and kilograms (kg); capacity in millilitres (ml) and litres (l).</li><li>Uses the comparative size of familiar objects to make reasonable estimations of length, weight, area and capacity.</li><li>Converts between common units of measurement using decimal notation, for example, 550cm = 5.5m; 3.009kg = 3kg 9g and applies this knowledge when solving problems.</li><li>Chooses the most appropriate measuring device for a given task, reading scales accurately, carrying out the required calculation and recording results in the correct unit.</li><li>Demonstrates understanding of the conservation of measurement.</li><li>Shows awareness of imperial units used in everyday life, for example, miles or stones</li></ul>

Curriculum Organiser	Number, Money and Measure – Measurement			
Milestone/s	Concept of Area; Concept of Volume; Standard Units; Convert Units; Calculations involving measurement; Formula and interrelationships			
SECOND LEVEL				
Experience and Outcome for Planning Teaching, Learning and Assessment	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			
<ul style="list-style-type: none"><li>I can calculate perimeter of squares and rectangles by adding the sides.</li><li>I can calculate the area of rectangles and squares by multiplying two adjacent sides.</li></ul>	<ul style="list-style-type: none"><li>I can use a given perimeter or area to draw shapes accurately.</li><li>I can calculate the perimeter of 2D shapes using the correct units.</li><li>I can investigate the perimeter of shapes with the same area.</li><li>I can calculate the area of composite shapes made from squares and rectangles.</li></ul>	<ul style="list-style-type: none"><li>I can use formula to calculate perimeter of squares and rectangles.</li><li>I can calculate the area of a right angled triangle using the knowledge <math>A = \frac{1}{2} \times l \times b</math>.</li><li>I can draw a triangle accurately given perimeter or area.</li><li>I can calculate the area of composite shapes made from squares, rectangles and triangles.</li><li>I can calculate the area of a parallelogram.</li></ul>	<ul style="list-style-type: none"><li>Draws shapes accurately with a given perimeter or area.</li><li>Calculates the perimeter of simple 2D shapes in millimetres (mm), centimetres (cm) and metres (m) and explains the choice of method used.</li></ul>	
<ul style="list-style-type: none"><li>I can investigate and measure the volume of a range of containers using water.</li></ul>	<ul style="list-style-type: none"><li>I can use cubes to measure containers.</li></ul>	<ul style="list-style-type: none"><li>I can calculate the volume of cubes and cuboids using the formula <math>V = l \times b \times h</math> and the correct units.</li></ul>	<ul style="list-style-type: none"><li>Calculates the area of 2D shapes in square millimetres (mm<sup>2</sup>) square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and explains the choice of method used.</li><li>Calculates the volume of simple 3D objects in cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>) and explains the choice of method used.</li></ul>	





Curriculum Organiser	Number, Money and Measure – Measurement	
Milestone/s	Standard Units; Convert Units; Calculations involving measurement; Formula and inter-relationships	
THIRD LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	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 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	
Progression Through Third Level 		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<ul style="list-style-type: none"><li>• I can provide realistic estimates or measurements using appropriate units.</li><li>• I ensure the units are consistent across the problem by converting between metric units.</li><li>• I can choose the appropriate degree of accuracy to work with by considering the information given or instrument used.</li><li>• I can convert between standard units to at least 3 decimal places when solving calculations of length, capacity, volume and area.</li><li>• I can calculate the area of a 2D shapes where different units are used.</li><li>• I can calculate the area of compound 2D shapes where different units are used.</li><li>• I can calculate the area of parallelograms, rhombuses and kites using the appropriate formula.</li><li>• I can calculate the volume of cubes and cuboids using the appropriate formula <math>V = l^3</math> and <math>V = l \times b \times h</math></li><li>• I can calculate the volume of regular prisms using the appropriate formula <math>V = Ah</math> where <math>A</math> is the area of the cross section.</li><li>• I can calculate the volume of a 3D object where different units are used.</li><li>• I can calculate the volume of compound 3D objects and explain my solution.</li></ul>		<ul style="list-style-type: none"><li>• Chooses appropriate units for length, area and volume when solving practical problems.</li><li>• Converts between standard units to at least 3 decimal places and applies this when solving calculations of length, capacity, volume and area.</li><li>• Calculates the area of a 2D shape where the units are inconsistent.</li><li>• Finds the area of compound 2D shapes and explains the method used.</li><li>• Uses a formula to calculate the area of parallelograms, rhombuses and kites.</li><li>• Uses a formula to calculate the volume of regular prisms and cuboids.</li><li>• Calculates the volume of a 3D object where the units are inconsistent.</li><li>• Finds the volume of compound 3D objects and explains the method used.</li></ul>


Curriculum Organiser	Number, Money and Measure – Measurement	
Milestone/s	Formula and inter-relationships; Tolerance in measurement	
FOURTH LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	I can apply my knowledge and understanding of measure to everyday problems and tasks and appreciate the practical importance of accuracy when making calculations.	
	MNU 4-11a	
	Through investigating real-life problems involving the surface area of simple 3D shapes, I can explore ways to make the most efficient use of materials and carry out the necessary calculations to solve related problems.	
	MTH 4-11b	
	I have explored with others the practicalities of the use of 3D objects in everyday life and can solve problems involving the volume of a prism, using a formula to make related calculations when required.	
MTH 4-11c		
Progression Through Fourth Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
		
<ul style="list-style-type: none"><li>• I can apply my knowledge and understanding of measure to a range of problems and tasks.</li><li>• I understand tolerance and how this can impact on accuracy when measuring.</li><li>• I know that rounding numbers inappropriately in a calculation will lead to an insufficiently accurate answer.</li><li>• I consider the practical importance of accuracy when making calculations.</li><li>• I can use formulae to calculate the surface area of cylinders, cuboids and triangular prisms.</li><li>• I can use formulae to calculate the volume of cuboids, triangular prisms and cylinders.</li><li>• I can use formulae to calculate the surface area of cylinders, cuboids and triangular prisms in practical contexts and discuss the efficient use of materials.</li><li>• I can use forumlae to solve problems to calculate the volume of cuboids, triangular prisms and cylinders.</li><li>• I can apply my knowledge of formulae when making practical decisions, for example packaging.</li></ul>		<ul style="list-style-type: none"><li>• Demonstrates the impact of inaccuracy and error, for example, the impact of rounding an answer before the final step in a multi-step calculation.</li><li>• Using formulae, calculates the surface area of cylinders, cuboids and triangular prisms and uses it to solve problems involving efficient use of materials.</li><li>• Using formulae, calculates the volume of cuboids, triangular prisms and cylinders and uses this to make practical decisions.</li></ul>


# Aberdeen City Council Numeracy and Mathematics Progression Pathway


Curriculum Organiser		Numeracy: Data and Analysis	
<div><div>Collect and organise</div><div>Concept of data analysis</div><div>Display and communicate</div><div>Drawing conclusions</div><div>Interrogate</div></div>			
EARLY LEVEL		FIRST LEVEL	
graphs charts collect data pictogram		bar graph block graph tables Carroll diagrams Venn diagrams axes	
		SECOND LEVEL	
		survey line graph frequency table pie chart spreadsheets	
THIRD LEVEL		FOURTH LEVEL	
robust vague misleading sample size representative sample, bias, trend compound bar graph/line graph stem and leaf chart scatter diagram		mean, median, mode range data set grouped data continuous data discrete data	

Curriculum Organiser	Information Handling – Data and Analysis		
Milestone/s	Concept of data analysis; Collect and organise and display and communicate		
EARLY LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can collect objects and ask questions to gather information, organising and displaying my findings in different ways. MNU 0- 20a I can match objects, and sort using my own and others’ criteria, sharing my ideas with others. MNU 0- 20b 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		
Progression Through Early Level			Benchmarks to Support Teachers’ Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>I can use real objects to display sets.</li><li>I can collect information about myself and about other pupils, for example hair colour, eye colour etc.</li><li>I can sort objects by colour, shape, size etc. into sets.</li><li>I can make a simple tally as collections of objects.</li><li>I can interpret simple pictographs and comment on the data that it shows, for example on – Fri lunch orders, which day does the kitchen have to order in most pizza.</li><li>I can create, with support, a simple pictograph.</li></ul>	<ul style="list-style-type: none"><li>I can obtain information for a task from a picture, video or story.</li><li>I can collect information about myself and about other pupils then sort data.</li><li>I can make a tally as collections of objects.</li><li>I can collate data into a simple table that communicates the process and justifies the choice of criteria.</li><li>I can interpret simple charts and graphs and demonstrate how they support planning, choices and decision making in familiar situations by applying to real life contexts.</li><li>I can create a simple pictogram independently, using digital technologies as appropriate.</li></ul>	<ul style="list-style-type: none"><li>Asks simple questions to collect data for a specific purpose.</li><li>Collects and organises objects for a specific purpose.</li><li>Applies counting skills to ask and answer questions, make relevant choices and decisions based on the data.</li><li>Uses knowledge of colour, shape, size and other properties to match and sort items in a variety of different ways and communicates the process and justifies choice of criteria.</li><li>Contributes to concrete or pictorial displays where one object or drawing represents one data value, using digital technologies as appropriate.</li><li>Interprets simple graphs, charts and signs and demonstrates how they support planning, choices and decision making in familiar situations.</li></ul>	

Curriculum Organiser	Information Handling – Data and Analysis		
Milestone/s	Collect and Organise; Display and Communicate		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I have explored a variety of ways in which data is presented and can ask and answer questions about the information it contains. MNU 1- 20a I have used a range of ways to collect information and can sort it in a logical, organised and imaginative way using my own and others’ criteria. MNU 1- 20b Using technology and other methods, I can display data simply, clearly and accurately by creating tables, charts and diagrams, using simple labelling and scale. MTH 1-21a		
Progression Through First Level 			Benchmarks to Support Teachers’ Professional Judgement of Achievement of a Level
<ul style="list-style-type: none"><li>• I can conduct a survey, for example using a questionnaire with yes or no answers.</li><li>• I can interpret information from bar graphs and diagrams.</li><li>• I can complete a bar graph, table or diagram using information given and give it relevant labelling.</li><li>• I can use tally marks to represent quantity and total them at the end.</li></ul>	<ul style="list-style-type: none"><li>• I can conduct a survey involving four options or choices.</li><li>• I can interpret information from tables and charts.</li><li>• I can construct a bar graph which has a title, two axes labelled, bars evenly spaced etc.</li><li>• I can construct a table or diagram including relevant labelling.</li><li>• I can, with assistance, create a bar graph using digital technologies.</li></ul>	<ul style="list-style-type: none"><li>• I can independently collect, organise, display and interpret information using bar graphs, tables, diagrams and charts.</li><li>• I can make use of digital technologies to display data, for example, as block graphs, bar graphs, tables, Carroll diagrams and Venn diagrams.</li><li>• I can use a simple data base to check information, for example my own details.</li></ul>	<ul style="list-style-type: none"><li>• Asks and answers questions to extract key information from a variety of data sets including charts, diagrams, bar graphs and tables. Uses this to inform choices and decisions.</li><li>• Selects and uses the most appropriate way to gather and sort data for a given purpose, justifying choice of method, for example, a survey, questionnaire or group tallies.</li><li>• 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.</li><li>• Includes a suitable title, simple labelling on both axes and an appropriate scale where one unit represents more than one data value in graphs.</li></ul>

Curriculum Organiser	Information Handling – Data and Analysis		
Milestone/s	Collect and organise, display and communicate, and Interrogate		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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 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 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 / MTH 3-21a		
Progression Through Second Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can independently collect, organise, display and interpret information using bar graphs, tables and charts.</li><li>• I can use a simple data base to extract information.</li><li>• I can create a bar graph using digital technologies.</li></ul>	<ul style="list-style-type: none"><li>• I can independently collect, organise, display and interpret information using bar graphs, tables and charts and line graphs.</li><li>• I can create a simple data base.</li><li>• I can create a line graph and spread sheet using digital technologies.</li></ul>	<ul style="list-style-type: none"><li>• I can independently collect, organise, display and interpret information using a range of graphs, tables and pie charts (pre-sectioned).</li><li>• I can understand that data is presented in a variety of ways by the media and it is not always reliable.</li></ul>	<ul style="list-style-type: none"><li>• Devises ways of collecting data in the most suitable way for the given task.</li><li>• 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, pie charts and spreadsheets.</li><li>• Analyses, interprets and draws conclusions from a variety of data and communicates findings effectively.</li><li>• Draws conclusions about the reliability of data taking into account, for example, the author, the audience, the scale and sample size used.</li><li>• Displays data appropriately making effective use of technology and chooses a suitable scale when creating graphs.</li></ul>

Curriculum Organiser	Information Handling – Data and Analysis		
Milestone/s	Collect and organise, display and communicate, interrogate and draw conclusions		
THIRD LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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 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 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 / MTH 3-21a		
Progression Through Third Level			Benchmarks to Support Teachers’ Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can find information in text, numerical, pictorial form from a variety of sources.</li><li>• I can discuss problems involved with carrying out a real-life survey.</li><li>• I can justify the sample size for my data collection and explain how bias may arise.</li><li>• I can calculate the mean and range of a data set.</li><li>• I can construct and interpret pie charts (not pre-sectioned), scatter diagrams, basic stem and leaf diagrams.</li></ul>	<ul style="list-style-type: none"><li>• I can interpret, describe and discuss the important features of a data set and discuss whether I believe the information to be robust, vague or misleading.</li><li>• When analysing information or collecting my own data I understand that bias may arise and the sample size can affect precision. I use this knowledge when I design my data collection process and when I justify my conclusions and predictions.</li><li>• I can draw compound bar graphs, line graphs, stem and leaf charts, scatter graphs and pie charts.</li><li>• I can describe the trend in data.</li></ul>	<ul style="list-style-type: none"><li>• Sources information or collects data making use of technology where appropriate.</li><li>• Interprets data sourced or given.</li><li>• Analyses data and draws appropriate conclusions.</li><li>• Determines if data 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.</li><li>• Collects data by choosing a representative sample to avoid bias.</li><li>• Organises and displays data appropriately in a variety of forms including compound bar and line graphs, stem and leaf charts, scatter graphs and pie charts making effective use of technology as appropriate.</li><li>• Describes trends in data using appropriate language, for example, upwards.</li></ul>	


Curriculum Organiser	Information Handling – Data and Analysis		
Milestone/s	Collect and organise; Display and communicate; Interrogate; Drawing Conclusions		
FOURTH LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can evaluate and interpret raw and graphical data using a variety of methods, comment on relationships I observe within the data and communicate my findings to others. MNU 4- 20a In order to compare numerical information in real life contexts, I can find the mean, median, mode and range of sets of numbers, decide which type of average is most appropriate to use and discuss how using an alternative type of average could be misleading. MTH 4- 20b I can select appropriately from a wide range of tables, charts, diagrams and graphs when displaying discrete, continuous or grouped data, clearly communicating the significant features of the data. MTH 4-21a		
Progression Through Fourth Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can interpret &amp; communicate conclusions from a variety of sources (raw and graphical data).</li><li>• I can calculate the mean, median, mode and range of a data set and justify which average I use.</li><li>• I can discuss the meaning of the above in context of the given situation.</li><li>• I can draw an appropriate line of best fit on a scatter diagram and use this to solve problems in context.</li><li>• I can draw a back to back stem and leaf diagram and interpret it using my knowledge of the mean, median mode or range.</li><li>• I can complete a 5-figure summary and use this to compare data.</li></ul>	<ul style="list-style-type: none"><li>• I can independently carry out a statistical investigation, present findings, discuss and justify my conclusions.</li><li>• I can calculate the mean from grouped data and discuss the meaning in context.</li><li>• I can create and complete a frequency table for discrete and grouped data.</li><li>• I can draw and interpret a cumulative frequency curve for discrete and grouped data.</li><li>• Given any piece of data (in any form) I can describe any trends there might be in appropriate language.</li></ul>	<ul style="list-style-type: none"><li>• Interprets raw and graphical data.</li><li>• Uses statistical language, for example, correlations to describe identified relationships.</li><li>• Calculates the mean, median, mode and range of a data set.</li><li>• Selects the most appropriate statistical diagram to display a given data set.</li><li>• Justifies the most appropriate statistical diagram to display a given data set.</li><li>• Uses different types of charts to display discrete, continuous and grouped data appropriately.</li></ul>	





# Aberdeen City Council Numeracy and Mathematics Progression Pathway


Curriculum Organiser		Numeracy: Ideas of Chance and Uncertainty		
<div><div>Simple choice and decision making</div><div>Predicting and describing likelihood</div><div>Choice and decision making based on likelihood</div><div>Probability</div><div>Applying knowledge of probability</div></div>				
EARLY LEVEL		FIRST LEVEL		SECOND LEVEL
There are no Experiences and Outcomes at this level.		fair, unfair likely, unlikely, likelihood certain, uncertain probable, possible, impossible		probability chance, good chance, poor chance, no chance risk, doubt equally likely equal chance, even chance, fifty-fifty biased, random
THIRD LEVEL		FOURTH LEVEL		
event mutually exclusive probability		Consolidation of previous terms at Fourth Level		

<b>Curriculum Organiser</b>	Information Handling - Ideas of Chance and Uncertainty
<b>Milestone/s</b>	
<b><u>EARLY LEVEL</u></b>	
No Experiences and Outcomes at Early Level	

Curriculum Organiser	Information Handling - Ideas of Chance and Uncertainty		
Milestone/s	Simple choice and decision making; Predicting and describing a likelihood		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can use appropriate vocabulary to describe the likelihood of events occurring, using the knowledge and experiences of myself and others to guide me. MNU 1-22a		
Progression Through First Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>I am beginning to use appropriate vocabulary when describing the likelihood of events occurring such as might happen, might not happen, likely/unlikely, certain.</li></ul>	<ul style="list-style-type: none"><li>I can discuss events using vocabulary that includes the terms certain, probable, unlikely/likely, possible/impossible etc. to describe outcomes.</li><li>I can represent chance/likelihood of events on a number line.</li></ul>	<ul style="list-style-type: none"><li>I can use the terms certain/uncertain, probable, likely/unlikely, possible/impossible, fair/unfair to predict the outcome of a scenario, for example if you pick a counter from a bag of 10 blue counters what is the probability of it being red?</li><li>I can represent chance or likelihood of events on a number line from zero to one, including <math>\frac{1}{2}</math>.</li></ul>	<ul style="list-style-type: none"><li>Uses mathematical vocabulary appropriately to describe the likelihood of events occurring in everyday situations, for example, probable, likely/unlikely, certain/uncertain, never, possible/impossible, fair/unfair.</li><li>Interprets data gathered through everyday experiences to make reasonable predictions of the likelihood of an event occurring.</li></ul>

Curriculum Organiser	Information Handling - Ideas of Chance and Uncertainty		
Milestone/s	Predicting and describing likelihood; Choice and decision making based likelihoodProbability		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can conduct simple experiments involving chance and communicate my predictions and findings using the vocabulary of probability. MNU 2-22a		
Progression Through Second Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can use appropriate vocabulary such as highly likely/unlikely etc., to describe the probability of an outcome/event.</li><li>• I can assign a numerical value to the likelihood of the occurrence of simple events on a 5 - point scale.</li><li>• I understand that probability can be represented by a fraction.</li><li>• I understand the concept of equally likely events – ‘equal chance’.</li><li>• I can list all the possible outcomes of simple events using tree diagrams and organised lists.</li></ul>	<ul style="list-style-type: none"><li>• I can investigate probability, through experimenting with tossing a coin, rolling a dice etc., the possible outcomes of simple, random events.</li><li>• I can identify 1 as certain and 0 as impossible on the number line.</li><li>• I can place events on a number line to demonstrate simple probabilities, for example the probability of tossing a coin and it landing heads up is 0.5.</li><li>• I can arrange events in order to determine which is most or least likely to occur.</li><li>• I understand that probability can be represented by a ratio; one in two, one in three and use the notation 1 : 6.</li></ul>	<ul style="list-style-type: none"><li>• I can use data to predict the outcome of a simple experiment and explain the reasoning behind the prediction.</li><li>• I understand that the more you carry out an experiment, the more confident you can become in predicting the result.</li><li>• I can use a number line from 0 to 1, where 0 is impossible and 1 is certain, to investigate and describe probability.</li><li>• I can place events on a number line to demonstrate the probability of any event.</li><li>• I can understand the terms favourable outcome and total outcomes.</li><li>• I am aware of how implications of chance are used in daily routines, decision making and the media.</li><li>• I can describe percentage chance, for example 100% chance, 0% chance, 50% chance.</li></ul>	<ul style="list-style-type: none"><li>• 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.</li><li>• Plans and carries out simple experiments involving chance with repeated trials, for example, what is the probability of throwing a double six if you throw two dice fifty times?</li><li>• Uses data to predict the outcome of a simple experiment and explains reasons for the prediction.</li></ul>


Curriculum Organiser	Information Handling - Ideas of Chance and Uncertainty		
Milestone/s	Probability; Applying knowledge of probability		
THIRD LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through Third Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I understand that probability is the measure of how likely an event is (between 0 and 1).</li><li>• I can determine probability of a familiar event, for example a king from a pack of cards.</li><li>• I can define probability as the number of favourable outcomes ÷ the total number of outcomes.</li><li>• I can calculate the probability that an event will not happen.</li></ul>			<ul style="list-style-type: none"><li>• I can use information collected in the past to make predictions or risk assessments for the future.</li><li>• I can use experiments and practical activities to make links between the frequency of an event occurring and the probability of the event occurring.</li><li>• I can calculate the expectation of an event i.e. how many times I expect the event to occur in a trial.</li></ul>
			<ul style="list-style-type: none"><li>• Uses the probability scale of 0 to 1 showing probability as a fraction, decimal fraction or percentage.</li><li>• Demonstrates understanding of the relationship between the frequency of an event happening and the probability of it happening.</li><li>• Calculates the probability of a simple event happening, for example, the probability of selecting a face card from a standard deck of cards.</li><li>• Identifies all of the mutually exclusive outcomes of a single event and calculates the probability of each.</li><li>• Investigates real-life situations which involve making decisions on the likelihood of events occurring and the consequences involved.</li></ul>


Curriculum Organiser	Information Handling - Ideas of Chance and Uncertainty	
Milestone/s	Probability; Applying knowledge of probability	
FOURTH LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	By applying my understanding of probability, I can determine how many times I expect an event to occur, and use this information to make predictions, risk assessment, informed choices and decisions. MNU 4-22a	
Progression Through Fourth Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
		
<ul style="list-style-type: none"><li>• I can identify all the possible mutually exclusive outcomes of two successive events.</li><li>• I can calculate expected probability.</li><li>• I can assign numerical values to a combination of successive events.</li><li>• I can make decisions in real life situations based on the likelihood of events occurring and consider the implications of possible decisions before choosing the way ahead.</li></ul>		<ul style="list-style-type: none"><li>• Determines the expected occurrences of an event.</li><li>• Applies knowledge and skills in calculating probability to make predictions.</li><li>• Assesses risk and makes informed decisions in real-life contexts.</li></ul>

# Aberdeen City Council Numeracy and Mathematics Progression Pathway

Curriculum Organiser		Mathematics: Expression and Equations			
<div><div>Initial algebraic thinking</div><div>Mathematical operators</div><div>Pictures and symbols</div><div>Evaluate algebraic expressions</div><div>Simple algebraic equations</div><div>Simplifying algebraic terms</div><div>Equations</div><div>Formulae</div><div>Factors of algebraic expressions</div><div>Mathematical Modelling</div><div>Solution Sets</div></div>					
EARLY LEVEL		FIRST LEVEL		SECOND LEVEL	
There are no Experiences and Outcomes at this level.		equal to not equal to less than greater than symbol		algebra simple equations	
THIRD LEVEL		FOURTH LEVEL			
like terms variables linear equations		distributive law linear inequalities closed intervals factorise common factor			

<b>Curriculum Organiser</b>	Number, Money and Measure - Expressions and Equations
<b>Milestone/s</b>	
<b><u>EARLY LEVEL</u></b>	
No Experiences and Outcomes at Early Level	

Curriculum Organiser	Number, Money and Measure - Expressions and Equations		
Milestone/s	Initial algebraic thinking; Mathematical operators; Pictures and symbols; Simple algebraic equations		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can compare, describe and show number relationships, using appropriate vocabulary and the symbols for equals, not equal to, less than and greater than. MTH 1-15a When a picture or symbol is used to replace a number in a number statement, I can find its value using my knowledge of number facts and explain my thinking to others. MTH 1-15b		
Progression Through First Level 			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<ul style="list-style-type: none"><li>I can find the missing numbers in number sentences when symbols are used using numbers to at least 20.</li><li>I can create a number statement using symbols for &lt;, &gt;, = within numbers to at least 20.</li><li>I can make pictures or diagrams for 'equals' and 'not equal to'.</li><li>I can demonstrate my understanding of the equal sign as a balance.</li></ul>	<ul style="list-style-type: none"><li>I can find the missing numbers in number sentences when symbols are used using numbers to at least 100.</li><li>I can use a simple function machine for addition and subtraction operations, talking about the input and output.</li><li>I can create a number statement using &lt;, &gt;, = within numbers to 100.</li><li>I can create a number statement using 'not equal to'.</li><li>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.</li></ul>	<ul style="list-style-type: none"><li>I can find the missing numbers in number sentences when symbols are used using numbers to at least 1000.</li><li>I can use a simple function machine for all numerical operations (+, −, ×, ÷), talking about the input and output.</li><li>I can create a number statement using &lt;, &gt;, = and 'not equal to' ≠ within numbers to 1000.</li><li>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.</li></ul>	<ul style="list-style-type: none"><li>Understands and accurately uses the terms 'equal to', 'not equal to', 'less than', 'greater than', and the related symbols (=, ≠, &lt;, &gt;) when comparing sets of quantities.</li><li>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, <math>\square \times 6 = 30</math> or <math>120 \div \square = 40</math>.</li></ul>

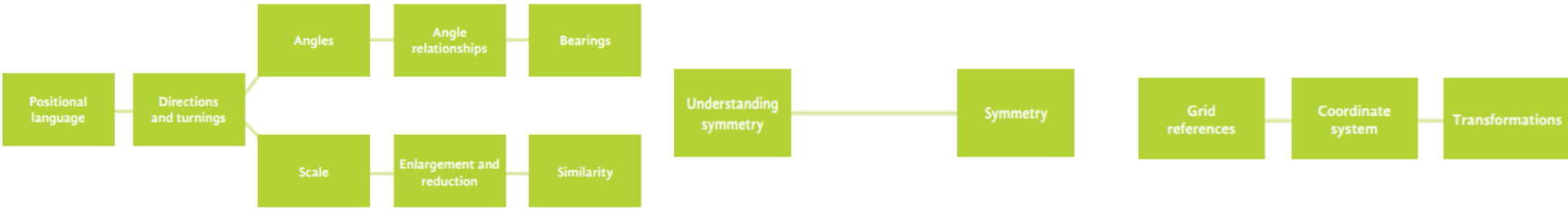
Curriculum Organiser	Number, Money and Measure - Expressions and Equations		
Milestone/s	Pictures and symbols; Simple algebraic equations; Evaluate algebraic expressions; Equations; Formulae		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can apply my knowledge of number facts to solve problems where an unknown value is represented by a symbol or letter. MTH 2-15a		
Progression Through Second Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>I can use function machines forward and reverse using addition and subtraction.</li></ul>	<ul style="list-style-type: none"><li>I can use function machines forward and reverse, including two or more operations.</li></ul>	<ul style="list-style-type: none"><li>I can use function machines forward and reverse, using all operations.</li></ul>	<ul style="list-style-type: none"><li>Solves simple algebraic equations with one variable, for example, <math>3x + 1 = 10</math>; <math>2x - 4 = 14</math>.</li></ul>





Curriculum Organiser	Number, Money and Measure - Expressions and Equations		
Milestone/s	Equations; Formulae;		
THIRD LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can collect like algebraic terms, simplify expressions and evaluate using substitution. MTH 3-14a 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 I can create and evaluate a simple formula representing information contained in a diagram, problem or statement. MTH 3-15b		
Progression Through Third Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div>&lt;</div>			


Curriculum Organiser	Number, Money and Measure - Expressions and Equations	
Milestone/s	Factors of algebraic expressions; Mathematical modelling; Solution Sets	
FOURTH LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	Having explored the distributive law in practical contexts, I can simplify, multiply and evaluate simple algebraic terms involving a bracket. MTH 4-14a I can find the factors of algebraic terms, use my understanding to identify common factors and apply this to factorise expressions. MTH 4-14b Having discussed the benefits of using mathematics to model real-life situations, I can construct and solve inequalities and an extended range of equations. MTH 4-15a	
Progression Through Fourth Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div></div>		<div></div>

# Aberdeen City Council Numeracy and Mathematics Progression Pathway


Curriculum Organiser		Mathematics: Angles, Symmetry and Transformation	
 <pre> graph LR     PL[Positional language] --- DT[Directions and turnings]     DT --- AN[Angles]     DT --- SC[Scale]     AN --- AR[Angle relationships]     AR --- BE[Bearings]     SC --- ER[Enlargement and reduction]     ER --- SI[Similarity]     US[Understanding symmetry] --- SY[Symmetry]     GR[Grid references] --- CS[Coordinate system]     CS --- TR[Transformations]           </pre>			
EARLY LEVEL	FIRST LEVEL	SECOND LEVEL	
position, over, under, above, below top, bottom, side, on, in, outside, inside, around in front, behind, front, back, before, after, beside next to, opposite, apart, between, middle, edge corner, direction, left, right, up, down, forwards, backwards, sideways, across, close, far, ear, along, through, to, from, towards, away, slide, roll, turn pattern, repeating pattern, match, symmetry, line of symmetry, symmetrical	full, half, quarter turn clockwise, anti-clockwise, right, left turn angle, right angle, protractor, degrees, greater/less than mirror line/reflection position, underneath, centre, journey, route higher, lower, ascend, descend grid, grid reference , row, column compass points, N, S, E, W coordinates, x/y-axis, horizontal, vertical, diagonal	acute, obtuse, reflex, straight angle supplementary, complementary angle vertices supplement/compliment of line symmetry, reflect, tangram axis, reflective/rotational symmetry tessellation origin, coordinates, quadrant NE, NW, SE, SW rotate, parallel, transformation	
THIRD LEVEL	FOURTH LEVEL		
alternate angles vertically opposite angles corresponding angles  rotational symmetry	Consolidation of previous terms at Fourth Level		

Curriculum Organiser	Shape, Position and Movement - Angles, Symmetry and Transformation		
Milestone/s	Positional Language; Directions and Turning; Understanding Symmetry; Symmetry		
EARLY LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through Early Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level	
			
<ul style="list-style-type: none"><li>• I can place an object in a position: in front, behind, above, below, left, right, forwards and backwards.</li><li>• I can describe the position of one object in relation to another.</li><li>• I can follow or give instructions to move forwards and backwards.</li><li>• I can create a symmetrical picture by folding.</li></ul>		<ul style="list-style-type: none"><li>• I can find an object from given directions.</li><li>• I can move a device forwards, backwards, left and right.</li><li>• I can describe a journey when solving a problem.</li><li>• I can recognise when a shape is symmetrical with at least one line of symmetry.</li><li>• I can create or complete some simple symmetrical shapes/pictures.</li><li>• I can collect items or pictures of items from real life that are symmetrical, for example leaves, insects.</li></ul>	<ul style="list-style-type: none"><li>• Understands and correctly uses the language of position and direction to solve simple problems in movement games and technology, for example, in front, behind, above, below, left, right, forwards and backwards.</li><li>• Identifies, describes and creates symmetrical pictures with at least one line of symmetry.</li></ul>

Curriculum Organiser	Shape, Position and Movement - Angles, Symmetry and Transformation		
Milestone/s	Angles; Angle Relationships; Bearings; Grid References; Symmetry		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can describe, follow and record routes and journeys using signs, words and angles associated with direction & 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 & 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		
Progression Through First Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can use positional vocabulary such as left and right, backwards and forwards, up and down.</li><li>• I can follow instructions to find an object.</li><li>• I can give specific instructions to find an object.</li></ul>	<ul style="list-style-type: none"><li>• I can recognise a right angle.</li><li>• I can use informal methods to estimate and measure whether angles are greater or less than 90°.</li><li>• I can find right angles in my environment and in 2D shapes.</li><li>• I can give and understand directions for turning through angles including full turn, half turn, quarter turn, clockwise, anticlockwise, right turn, left turn, right angle.</li><li>• I can recognise the names of the 4 compass points and relate them to the appropriate angles.</li><li>• I can use the terms North, South, East and West when giving directions.</li></ul>	<ul style="list-style-type: none"><li>• I can recognise the names of the 8 compass points and relate these to the appropriate angles.</li><li>• I can follow and give directions using the names of the 8 compass points.</li><li>• I can create a square or rectangle by giving instructions using technology.</li></ul>	<ul style="list-style-type: none"><li>• Uses technology and other methods to describe, follow and record directions using words associated with angles, directions and turning including full turn, half turn, quarter turn, clockwise, anticlockwise, right turn, left turn, right angle and associated angles measured in degrees.</li><li>• Knows and uses compass points, for example, North, South-West and relates these to the appropriate angles.</li><li>• Uses informal methods to estimate, measure and describe the size of angles in relation to a right angle.</li><li>• Finds right angles in the environment and in well-known 2D shapes.</li></ul>
<ul style="list-style-type: none"><li>• I can investigate symmetry in simple 2D shapes.</li><li>• I can find one line of symmetry in 2D shapes.</li><li>• I can complete the missing half of a symmetrical pattern or shape.</li></ul>	<ul style="list-style-type: none"><li>• I can complete a symmetrical pattern, design or shape with more than one line of symmetry.</li></ul>	<ul style="list-style-type: none"><li>• I can find 2 lines of symmetry on shapes.</li><li>• I can create a symmetrical pattern or design with more than one line of symmetry.</li></ul>	<ul style="list-style-type: none"><li>• Identifies symmetry in patterns, pictures, nature and 2D shapes.</li><li>• Creates symmetrical pictures and designs with more than one line of symmetry.</li></ul>

Curriculum Organiser	Shape, Position and Movement - Angles, Symmetry and Transformation		
Milestone/s	Angles; Angle Relationships; Bearings; Grid References; Coordinate System; Scale		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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 co-ordinate system to plot and describe the location of a point on a grid. MTH 2-18a / 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 2-19a / MTH 3-19a		
Progression Through Second Level 			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<ul style="list-style-type: none"><li>• I know a right angle is 90°, a straight line is 180° and a full turn is 360°.</li><li>• I know an acute angle is less than 90°.</li><li>• I know an obtuse angle is more than 90° but less than 180°.</li><li>• I know a reflex angle is more than 180°, but less than 360°.</li></ul>			<ul style="list-style-type: none"><li>• Uses mathematical language, for example, acute, obtuse, straight and reflex to describe and classify a range of angles identified within shapes in the environment.</li><li>• Knows that complementary angles add up to 90 degrees and supplementary angles add up to 180 degrees and uses this knowledge to calculate missing angles.</li></ul>
<ul style="list-style-type: none"><li>• I can accurately measure angles up to 360°.</li><li>• I can calculate missing angle(s) in a triangle.</li></ul>			
<ul style="list-style-type: none"><li>• I can use technology to draw a range of angles.</li><li>• I can accurately measure angles up to 180°.</li><li>• I know the eight compass points.</li><li>• I can follow and give directions involving the eight compass points.</li></ul>			<ul style="list-style-type: none"><li>• I can construct and draw angles using a ruler and a protractor.</li><li>• I can use my knowledge of angles to solve problems.</li><li>• I can use standard notation to record any 3 figure bearing, for example 060°.</li></ul>
<ul style="list-style-type: none"><li>• I can use technology to draw a range of angles.</li><li>• I know the three figure bearings for the eight compass points.</li><li>• I can draw any bearing up to 180°.</li></ul>			<ul style="list-style-type: none"><li>• Measures and draws accurately a range of angles using rulers and protractors and applies knowledge of the relative size of angles to solve problems in a range of contexts.</li><li>• Uses knowledge of the link between compass points and angles to describe, follow and record directions.</li></ul>

<ul style="list-style-type: none"> <li>• I can use grid references to read, plot and record locations on a grid.</li> <li>• I can identify and draw lines of up to 4 lines of symmetry on 2D shapes.</li> <li>• I can complete and/or create symmetrical shapes and patterns with and without digital technology.</li> </ul>	<ul style="list-style-type: none"> <li>• I can use my knowledge of the coordinate system to plot and describe the location of a point on a grid.</li> <li>• I can identify and draw all lines of symmetry on a wide range of 2D shapes.</li> </ul>	<ul style="list-style-type: none"> <li>• Interprets maps, models or plans with simple scales, for example, 1cm:1km.</li> <li>• Describes, plots and records the location of a point on a grid using coordinator notation.</li> <li>• Identifies and illustrates all lines of 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.</li> </ul>
--	--	---


Curriculum Organiser	Shape, Position and Movement - Angles, Symmetry and Transformation		
Milestone/s	Angles; Angle Relationships; Bearings; Enlargement and Reduction; Similarity: Transformations		
THIRD LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	<p>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</p> <p>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</p> <p>I can apply my understanding of scale when enlarging or reducing pictures and shapes, using different methods, including technology. MTH 3-17c</p> <p>I can use my knowledge of the coordinate system to plot and describe the location of a point on a grid. MTH 3-18a</p> <p>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</p>		
Progression Through Third Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I know that the sum of the 3 angles of a triangle add to 180° and find missing angles.</li><li>• I know that the angles around a point add to 360° and find missing angles.</li><li>• I can name angles using appropriate notation for example <math>\angle ABC</math>.</li><li>• I can measure bearings on a map or plan.</li><li>• I can measure and read distance from a scale map or plan.</li><li>• I can draw bearings onto a map or plan to plot a route or journey.</li><li>• I can draw routes or journeys onto a scale map or plan.</li><li>• I can use a scale factor to enlarge a picture or shape.</li><li>• I have explored how technology can be used to enlarge or reduce pictures.</li><li>• I can plot and describe a point on a grid using coordinates in the first quadrant.</li></ul>			<ul style="list-style-type: none"><li>• I understand vertically opposite angles, corresponding angles and alternate angles and can use this to find missing angles.</li><li>• I can create a scale map or plan and record routes or journeys with bearings and distances.</li><li>• I can calculate bearings and distances from a scale map or plan.</li><li>• I understand that a fractional scale factor can create a reduction.</li><li>• I can reflect a shape in the <math>x</math>-axis or <math>y</math>-axis.</li></ul>
			<ul style="list-style-type: none"><li>• Names angles using notation such as <math>\angle ABC</math></li><li>• Identifies corresponding angles.</li><li>• Identifies alternate angles.</li><li>• Identifies vertically opposite angles.</li><li>• Uses the angle properties of triangles and quadrilaterals to find missing angles.</li><li>• Applies knowledge and understanding of scale to enlarge and reduce objects in size showing understanding of linear scale factor.</li><li>• Uses bearings in a navigational context including creating scale drawings.</li><li>• Plots and describes a location point on a grid using coordinates in the first quadrant.</li><li>• Identifies all lines of symmetry in 2D shapes.</li><li>• Creates symmetrical patterns and pictures.</li></ul>



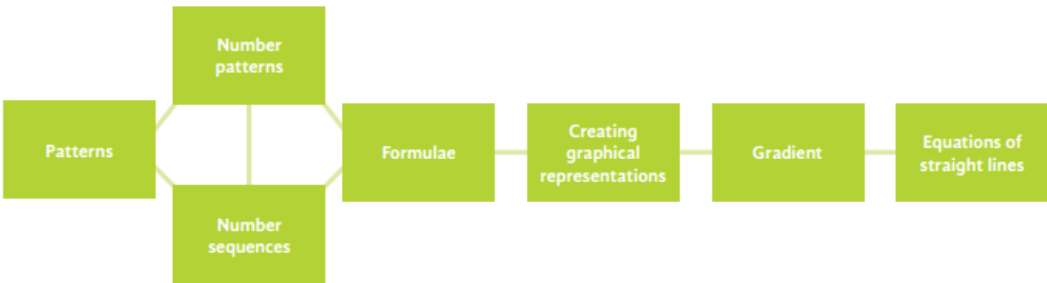
Curriculum Organiser	Shape, Position and Movement - Angles, Symmetry and Transformation		
Milestone/s	Symmetry; Angles; Scale; Enlargement and Reduction; Coordinate System; Transformations		
FOURTH LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	Having investigated the relationship between a radius and a tangent and explored the size of the angle in a semi-circle, I can use the facts I have established to solve related problems. MTH 4-17a I can apply my understanding of the properties of similar figures to solve problems involving length and area. MTH 4-17b I can plot and describe the position of a point on a 4-quadrant coordinate grid. MTH 4-18a I can apply my understanding of the 4-quadrant coordinate system to move, and describe the transformation of, a point or shape on a grid. MTH 4-18b Having investigated patterns in the environment, I can use appropriate mathematical vocabulary to discuss the rotational properties of shapes, pictures and patterns and can apply my understanding when completing or creating designs. MTH 4-19a		
Progression Through Fourth Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>			

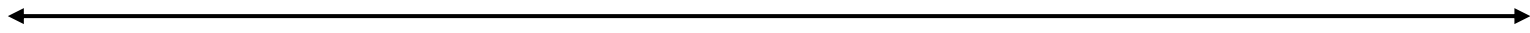
# Aberdeen City Council Numeracy and Mathematics Progression Pathway


Curriculum Organiser		Mathematics: Multiples, Factors and Primes	
<div><div>Multiples and factors</div><div>Common multiples and factors</div><div>Prime numbers</div></div>			
EARLY LEVEL		FIRST LEVEL	
There are no Experiences and Outcomes at this level.		There are no Experiences and Outcomes at this level.	
THIRD LEVEL		FOURTH LEVEL	
lowest common multiple highest common multiple common factor		Consolidation of previous terms at Fourth Level	


Curriculum Organiser	Number, Money and Measure - Multiples, Factors and Primes		
Milestone/s			
EARLY LEVEL			
No Experiences and Outcomes at Early Level			
FIRST LEVEL			
No Experiences and Outcomes at First Level			
Curriculum Organiser	Number, Money and Measure - Multiples, Factors and Primes		
Milestone/s	Multiples and factors; Common multiples and factors		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	Having explored the patterns and relationships in multiplication and division, I can investigate and identify the multiples and factors of numbers. MTH 2-05a		
Progression Through Second Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I understand what a multiple of a number is and how to generate a sequence of multiples.</li><li>• I can skip count forwards and backwards to identify multiples.</li><li>• I understand what a factor of a number is.</li><li>• I can find some of the factors of a given whole number.</li></ul>	<ul style="list-style-type: none"><li>• I can use known relationships between multiplication and division to find multiples and factor pairs for a given whole number.</li><li>• I can find all the factors of any whole number.</li></ul>	<ul style="list-style-type: none"><li>• I can apply my knowledge and understanding of multiples and factors to solve related problems in number, money and measurement.</li></ul>	<ul style="list-style-type: none"><li>• Identifies multiples and factors of whole numbers and applies knowledge and understanding of these when solving relevant problems in number, money and measurement.</li></ul>

Curriculum Organiser	Number, Money and Measure - Multiples, Factors and Primes		
Milestone/s	Multiples and factors; Common multiples and factors; Prime numbers		
THIRD LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through Third Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>			


Curriculum Organiser		Mathematics: Patterns and Relationships	
			
EARLY LEVEL		FIRST LEVEL	SECOND LEVEL
size continue bigger, larger, smaller symmetrical pattern repeating pattern match			square numbers triangular numbers Pascal's triangle Fibonacci sequence number patterns
THIRD LEVEL		FOURTH LEVEL	
sequence sequence rule		gradient	

Curriculum Organiser	Number, Money and Measure – Patterns and Relationships		
Milestone/s	Patterns; Number patterns		
EARLY LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through Early Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can explore, identify and discuss patterns in the environment.</li><li>• I can copy a repeating pattern.</li><li>• I can continue a repeating pattern.</li></ul>			<ul style="list-style-type: none"><li>• Copies, continues and creates simple patterns involving objects, shapes and numbers.</li><li>• Explores, recognises and continues simple number patterns and describes them using appropriate mathematical vocabulary.</li></ul>
<ul style="list-style-type: none"><li>• I can find missing numbers on a number line up to 10.</li></ul>			<ul style="list-style-type: none"><li>• Finds missing numbers on a number line ranging from 0 to at least at least 20.</li></ul>
<ul style="list-style-type: none"><li>• I can copy a repeated pattern using shapes and numbers.</li><li>• I can continue a repeat pattern using shapes and numbers.</li><li>• I can create increasingly complex repeated patterns.</li><li>• I can use language associated with patterns, for example next, before, after.</li><li>• I can describe a simple repeating pattern.</li></ul>			
<ul style="list-style-type: none"><li>• I can find missing numbers on a number line ranging from 0 to at least 20.</li><li>• I can follow simple addition patterns.</li><li>• I can follow simple subtraction patterns.</li></ul>			

Curriculum Organiser	Number, Money and Measure – Patterns and Relationships		
Milestone/s	Patterns; Number Patterns; Number Sequences		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I can continue and devise more involved repeating patterns or designs, using a variety of media. MTH 1-13a Through exploring number patterns, I can recognise and continue simple number sequences and can explain the rule I have applied. MTH 1-13b		
Progression Through First Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can count forwards and backwards in 2s, 5s and 10s within 100 starting from a multiple of 10.</li><li>• I can recognise and continue odd and even number sequences.</li><li>• I can continue and create repeating patterns and sequences using practical resources.</li><li>• I can find number patterns using addition and subtraction using practical resources and number lines.</li></ul>	<ul style="list-style-type: none"><li>• I can count forwards and backwards in 2s, 5s and 10s within 500 starting from any given number.</li><li>• I can count in 2s, 5s and 10s using a number square and counters to help me find patterns.</li><li>• I can continue and create a pattern and sequence using a variety of media.</li><li>• I can double numbers to continue a given number sequence.</li><li>• I can skip count in jumps of 2, 5 and 10.</li></ul>	<ul style="list-style-type: none"><li>• I can count forwards and backwards in 2s, 5s and 10s to at least 1000 starting from any given number.</li><li>• I can recognise and continue number sequences up to 1000 (commutative law)</li><li>• I can describe patterns in number using my knowledge of some multiplication tables.</li><li>• I can link number sequences in multiplication, for example 4, 8, 12, 16</li><li>• I can half numbers to continue a given number sequence.</li><li>• I can recognise, continue and explain the rule for simple number sequences.</li><li>• I can skip count using my knowledge of multiples.</li></ul>	<ul style="list-style-type: none"><li>• Counts forwards and backwards in 2s, 5s and 10s from any whole number up to at least 1000.</li><li>• Describes patterns in number, for example, in the multiplication tables and hundred square.</li><li>• Continues and creates repeating patterns involving shapes, pictures, symbols and movements, making use of a variety of media.</li><li>• Describes, continues and creates number patterns using addition, subtraction, doubling, halving, counting in jumps (skip counting) and known multiples and is able to explain the rule applied.</li></ul>

Curriculum Organiser	Number, Money and Measure – Patterns and Relationships		
Milestone/s	Number patterns; Number sequences		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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		
Progression Through Second Level 			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<ul style="list-style-type: none"><li>• I can continue a sequence using a rule explained in words, for example starting at 3 and add 4.</li><li>• I can describe a simple sequence using words.</li><li>• I can write the rule to a simple sequence.</li><li>• I can find a missing number in a simple sequence.</li></ul> <ul style="list-style-type: none"><li>• I can apply knowledge of multiples, factors, square numbers and triangular numbers to generate number patterns for others to continue.</li></ul>			<ul style="list-style-type: none"><li>• I can describe more complex sequences using words.</li><li>• I can write the rule to more complex sequence.</li><li>• I can find a missing number in a complex sequence.</li></ul> <ul style="list-style-type: none"><li>• I can investigate and understand common sequences, for example Fibonacci, square numbers, triangular numbers.</li></ul> <ul style="list-style-type: none"><li>• Explains and uses a rule to extend well known number sequences including square numbers, triangular numbers, Pascal's triangle and Fibonacci sequence.</li></ul> <ul style="list-style-type: none"><li>• Applies knowledge of multiples, factors, square numbers and triangular numbers to generate number patterns for others to continue.</li></ul>


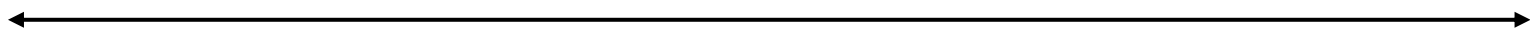


Curriculum Organiser	Number, Money and Measure – Patterns and Relationships		
Milestone/s	Formulae		
THIRD LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	Having explored number sequences, I can establish the set of numbers generated by a given rule and determine a rule for a given sequence, expressing it using appropriate notation. MTH 3-13a		
Progression Through Third Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can create a table of values from a pattern to help me find the rule.</li><li>• I can generate number sequences from a given rule.</li><li>• I can recognise relationships between consecutive terms and use this to write a rule for a sequence of numbers.</li></ul>			<ul style="list-style-type: none"><li>• I can write the rule using appropriate notation.</li><li>• I can use a rule for a sequence to calculate the value of any given element in the pattern.</li><li>• I have investigated simple sequences that involve whole number powers.</li><li>• I can use algebraic notation to express the rule for a given sequence.</li></ul>
			<ul style="list-style-type: none"><li>• Generates number sequences from a given rule, for example, <math>T = 4x + 6</math>.</li><li>• Determines the rule defining a sequence of numbers, for example 4, 11, 18, 25...</li><li>• 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, <math>C = 0.05m + 75</math>.</li></ul>


Curriculum Organiser	Number, Money and Measure – Patterns and Relationships	
Milestone/s	Formulae; Creating graphical representations; Gradient; Equations of straight lines	
FOURTH LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	Having explored how real-life situations can be modelled by number patterns, I can establish a number sequence to represent a physical or pictorial pattern, determine a general formula to describe the sequence, then use it to make evaluations and solve related problems. MTH 4-13a	
	I have discussed ways to describe the slope of a line, can interpret the definition of gradient and can use it to make relevant calculations, interpreting my answer for the context of the problem. MTH 4-13b	
	Having investigated the pattern of the coordinate points lying on a horizontal or vertical line, I can describe the pattern using a simple equation. MTH 4-13c	
	I can use a given formula to generate points lying on a straight line, plot them to create a graphical representation then use this to answer related questions. MTH 4-13d	
Progression Through Fourth Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div>←</div> <div>→</div>		
<ul style="list-style-type: none"><li>• I can determine a general formula to describe a sequence and use this to find missing terms and solve related problems.</li><li>• I understand the concept of slope in real life context and know that the gradient represents the slope.</li><li>• I know that gradient is represented by <math>m = \frac{\text{vertical distance}}{\text{horizontal distance}}</math>.</li><li>• I can find the gradient of a straight line.</li><li>• I understand positive and negative gradients and use this to draw conclusions about the gradient of a line.</li><li>• I can calculate the gradient of a line given 2 coordinates using <math>m = \frac{\text{vertical distance}}{\text{horizontal distance}}</math> or <math>m = \frac{y_2 - y_1}{x_2 - x_1}</math></li><li>• I know the gradient of horizontal line is represented by <math>y = b</math> and a vertical line by <math>x = a</math>.</li><li>• I understand the term y-intercept.</li><li>• I can use the formula <math>y = mx + c</math> to express the equation of a line and draw this line.</li><li>• I can use a formula to create a graph of a straight line and interpret the graph to solve problems in context.</li></ul>		<ul style="list-style-type: none"><li>• Determines a general formula to describe a sequence and uses it to solve related problems.</li><li>• Calculates the gradient of lines in a co-ordinate diagram.</li><li>• Calculates the gradient of lines from 2 given coordinates.</li><li>• Draws conclusions about the gradient of a line.</li><li>• Communicates the gradient of vertical and horizontal lines and states the equation of these lines as <math>x = a</math> or <math>y = b</math> or equivalent.</li><li>• Uses the formula <math>y = mx + c</math> to express the equation of a line.</li><li>• Uses a given formula to plot a straight line.</li><li>• Uses a graph of a straight line to interpret real-life situations and solve related problems.</li></ul>

Curriculum Organiser		Mathematics: Powers and Roots	
<div><div>Powers</div><div>Scientific Notation</div><div>Roots</div></div>			
EARLY LEVEL	FIRST LEVEL	SECOND LEVEL	
There are no Experiences and Outcomes at this level.	There are no Experiences and Outcomes at this level.	There are no Experiences and Outcomes at this level.	
THIRD LEVEL	FOURTH LEVEL		
powers square root roots cubed squared	Consolidation of previous terms at Fourth Level.		

Curriculum Organiser	Number, Money and Measure - Powers and Roots	
Milestone/s	Powers	
EARLY LEVEL		
No Experiences and Outcomes at Early Level		
FIRST LEVEL		
No Experiences and Outcomes at First Level		
SECOND LEVEL		
No Experiences and Outcomes at Second Level		
THIRD LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	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	
Progression Through Third Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>		


Curriculum Organiser	Number, Money and Measure - Powers and Roots		
Milestone/s	Powers; Scientific Notation; Roots		
FOURTH LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I have developed my understanding of the relationship between powers and roots and can carry out calculations mentally or using technology to evaluate whole numbers powers and roots, of any appropriate number. MTH 4-06a		
Progression Through Fourth Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level	
			
<ul style="list-style-type: none"><li>• I can explain and use the relationship between powers and roots.</li><li>• I can evaluate whole number powers and roots of any appropriate number using a mental calculation strategy.</li><li>• I can use a calculator or other technology to evaluate whole number powers and roots of any appropriate number.</li><li>• I can solve problems with whole number powers and roots of any appropriate number, choosing the appropriate notation and calculation strategy.</li><li>• I understand the inverse relationship between powers and roots and can evaluate, for example <math>\sqrt[3]{27} = 3</math>.</li></ul>		<ul style="list-style-type: none"><li>• Uses knowledge of the relationship between powers and roots to evaluate whole number powers of any appropriate number, for example <math>3^4 = 81</math>.</li><li>• Uses knowledge of the relationship between powers and roots to evaluate whole number roots of any appropriate number, for example <math>\sqrt[3]{27} = 3</math>.</li><li>• Shows understanding that the square root is the inverse process of squaring a number.</li></ul>	
Experience and Outcome for Planning Teaching, Learning and Assessment	Within real-life contexts, I can use scientific notation to express large or small numbers in a more efficient way and can understand and work with numbers written in this form. MTH 4-06b		
Progression Through Fourth Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level	
			
<ul style="list-style-type: none"><li>• I can explain the applications and benefits of using scientific notation.</li><li>• I can use scientific notation to express large and small numbers.</li></ul>		<ul style="list-style-type: none"><li>• I can convert between scientific notation and decimal notation.</li><li>• I can solve real life problems by reading values in scientific notation and performing simple calculations with numbers expressed in scientific notation.</li></ul>	
		<ul style="list-style-type: none"><li>• Uses knowledge of mathematical notation to express large numbers in scientific notation.</li><li>• Uses knowledge of mathematical notation to express small numbers in scientific notation.</li></ul>	


Curriculum Organiser		Mathematics: Properties of 2D Shapes and 3D Objects	
<div><div>Awareness of 2D shapes and 3D objects</div><div>Properties of 2D shapes and 3D objects</div><div>Using 2D shapes and 3D objects</div><div>Nets of 3D objects</div><div>Representation of 2D shapes and 3D objects</div><div>Accurate drawing of 2D shapes</div><div>Formulae and inter-relationships within triangles</div><div>Circles</div></div>			
EARLY LEVEL		FIRST LEVEL	
<div>2D shape, circle, triangle, square, rectangle, star, straight, round, flat, curved, solid</div> <div>3D object, cube, sphere, cone, cuboid, cylinder</div>		<div>circular, triangular, rectangular, pentagon, hexagon, octagon, semi-circle, pentagonal, hexagonal, octagonal, quadrilateral, diagonal, corner, diameter, radius, circumference, pair of compasses</div> <div>hemisphere, pyramid, prism, side, face, edge, corner, base, square base, angle</div>	
		SECOND LEVEL	
		<div>two dimensional, vertex, vertices, rhombus, equilateral/isosceles/scalene triangle, heptagon, polygon, kite, parallelogram, trapezium</div> <div>three-dimensional, vertex, vertices, nets, cylindrical, spherical, octahedron, dodecahedron, tetrahedron, polyhedron</div>	
THIRD LEVEL		FOURTH LEVEL	
<div>tangent</div> <div>pi</div> <div>arc</div> <div>sector</div>		<div>Pythagoras</div> <div>trigonometry</div> <div>chord</div> <div>sine</div> <div>cosine</div> <div>tangent</div> <div>hypotenuse</div> <div>opposite</div> <div>adjacent</div> <div>segment</div>	


Curriculum Organiser	Shape, Position and Movement - Properties of 2D shapes and 3D objects		
Milestone/s	Awareness of 2D shapes and 3D objects		
EARLY LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I enjoy investigating objects and shapes and can sort, describe and be creative with them. MTH 0-16a		
Progression Through Early Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can collect, handle and talk about a range of shapes.</li><li>• I can name shapes in the world around me.</li><li>• I can create or copy 3D structures using building blocks or everyday objects.</li><li>• I can recognise and name 2D shapes - square, circle, rectangle and triangle.</li><li>• I can find shapes that roll and shapes that do not roll.</li><li>• I can find shapes that stack and shapes that do not stack.</li></ul>			<ul style="list-style-type: none"><li>• I can identify and match 2D shapes and 3D objects within the local environment.</li><li>• I can recognise and name 3D objects - cube, cuboid, cylinder, sphere and cone.</li><li>• I can describe 2D shapes.</li><li>• I can sort 2D shapes and 3D objects into groups.</li><li>• I can use the terms straight, round, flat, curved, rolls, stacks, solid.</li><li>• I can talk about the difference between 2D and 3D.</li></ul>
			<ul style="list-style-type: none"><li>• Recognises, describes and sorts common 2D shapes and 3D objects according to various criteria, for example straight, round, flat and curved.</li></ul>

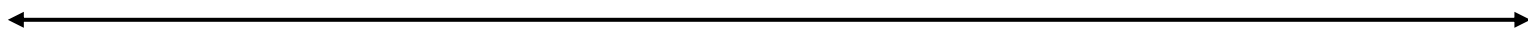
Curriculum Organiser	Shape, Position and Movement - Properties of 2D shapes and 3D objects		
Milestone/s	Properties of 2D shape and 3D objects		
FIRST LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I have explored simple 3D objects and 2D shapes and can identify, name 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		
Progression Through First Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>			



Curriculum Organiser	Shape, Position and Movement - Properties of 2D shapes and 3D objects		
Milestone/s	Properties of 2D shapes and 3D objects; Using 2D shapes and 3D objects; Nets of 3D objects; Representations of 2D shapes and 3D objects; Accurate drawing of 2D shapes; Circles		
SECOND LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	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 Through practical activities, I can show my understanding of the relationship between 3D objects and their nets. MTH 2-16b		
Progression Through Second Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can name and identify properties of right-angled and equilateral triangles.</li><li>• I can name and classify 2D shapes and 3D objects and describe their properties using appropriate vocabulary including face, edge, vertex and angle.</li><li>• I can identify a 3D object from a net.</li><li>• I understand that a regular polygon is equiangular (all angles are equal in measure) and equilateral (all sides have the same length).</li></ul>	<ul style="list-style-type: none"><li>• I can name and identify properties of right-angled, isosceles, equilateral and scalene triangles.</li><li>• I can identify the parts of a circle including the terms radius, diameter and circumference.</li><li>• I can create a net for a 3D object.</li><li>• I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li></ul>	<ul style="list-style-type: none"><li>• I can recognise and name common quadrilaterals and describe their properties.</li><li>• I can understand the term diagonal and investigate the number of diagonals in a range of 2D shapes.</li></ul>	<ul style="list-style-type: none"><li>• Uses mathematical language to describe the properties of a wide range of regular and irregular 2D shapes and 3D objects.</li><li>• Describes 2D shapes and 3D objects using specific vocabulary including face, edge, vertex, angle, diagonal, radius, diameter and circumference and applies this knowledge to demonstrate understanding of the relationship between 3D objects and their nets.</li></ul>
<ul style="list-style-type: none"><li>• I can identify how and where 3D objects are used in the environment.</li></ul>		<ul style="list-style-type: none"><li>• I can identify and describe 2D shapes and 3D objects within the environment and explains why their properties match their function, for example, the importance of triangles in a bridge structure.</li></ul>	<ul style="list-style-type: none"><li>• Identifies and describes 2D shapes and 3D objects within the environment and explains why their properties match their function, for example, the importance of triangles in a bridge structure.</li></ul>

<b><u>SECOND LEVEL</u></b>		
<b>Experience and Outcome for Planning Teaching, Learning and Assessment</b>	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	
<b>Progression Through Second Level</b> 		<b>Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level</b>
<ul style="list-style-type: none"> <li>• I know that the radius is half of the diameter and uses this knowledge to draw circles using a pair of compasses.</li> <li>• I can make use of digital technologies and mathematical instruments to draw 3D objects.</li> <li>• I understand that there are instances when not all parts of the 3D object can be seen.</li> </ul>		<ul style="list-style-type: none"> <li>• Knows that the radius is half of the diameter and uses this knowledge to draw circles using a pair of compasses.</li> <li>• Makes use of digital technologies and mathematical instruments to draw representations of 3D objects showing understanding that not all parts of the 3D object can be seen.</li> </ul>



Curriculum Organiser	Shape, Position and Movement - Properties of 2D shapes and 3D objects		
Milestone/s	Accurate drawing of 2D shape; Circles		
THIRD LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	Having investigated a range of methods, I can accurately draw 2D shapes using appropriate mathematical instruments and methods. MTH 3-16a		
Progression Through Third Level			Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
			
<ul style="list-style-type: none"><li>• I can use a variety of methods to accurately draw triangles, quadrilaterals and polygons, using mathematical instruments.</li><li>• I can use the formulae <math>r = \frac{1}{2}d</math> and <math>d = 2r</math> when calculating the radius and diameter and can use this as an accurate method of drawing a circle.</li></ul>			<ul style="list-style-type: none"><li>• Demonstrates a variety of methods to accurately draw 2D shapes, including triangles and regular polygons, using mathematical instruments.</li></ul>

Curriculum Organiser	Shape, Position and Movement - Properties of 2D shapes and 3D objects		
Milestone/s	Formulae and inter-relationships within triangles; Circles;		
FOURTH LEVEL			
Experience and Outcome for Planning Teaching, Learning and Assessment	I have explored the relationships that exist between the sides, or sides and angles, in right-angled triangles and can select and use an appropriate strategy to solve related problems, interpreting my answer for the context. MTH 4-16a Having investigated the relationships between the radius, diameter, circumference and area of a circle, I can apply my knowledge to solve related problems. MTH 4-16b		
Progression Through Fourth Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level	
			
<ul style="list-style-type: none"><li>• I know and correctly use the formulae <math>C = \pi d</math> and <math>A = \pi r^2</math>.</li><li>• I have investigated and can use the relationship between the radius, diameter and circumference of a circle to solve related problems.</li><li>• I have investigated and can use the relationship between the radius and area of a circle to solve related problems.</li><li>• I have investigated and can use the Theorem of Pythagoras for calculating the length of any side in a right-angled triangle.</li><li>• I can calculate the length of any side in a right-angled triangle using trigonometry.</li><li>• I can find missing angles in a right-angled triangle using trigonometry.</li></ul>		<ul style="list-style-type: none"><li>• I can solve related problems for compound shapes including parts of circles.</li><li>• I can find radius/diameter when either area/circumference is given.</li><li>• I can solve problems using the Theorem of Pythagoras and trigonometry, including coordinate systems.</li><li>• I can correctly choose between trigonometry and Pythagoras to solve problems in real life contexts.</li><li>• Uses the formula to calculate the circumference of a circle.</li><li>• Uses the formula to calculate the area of a circle.</li><li>• Calculates diameter and radius of a circle when given the area or circumference.</li><li>• Calculates the length of any side of a right-angled triangle using the Theorem of Pythagoras.</li><li>• Calculates the size of an angle in a right-angled triangle using trigonometry.</li><li>• Calculates the length of a side in a right-angled triangle using trigonometry.</li></ul>	

# Aberdeen City Council Numeracy and Mathematics Progression Pathway

Curriculum Organiser		Mathematics: Mathematics – Its Impact on the World Past, Present and Future	
<div><div>Mathematics in the environment</div><div>Numbers through history</div><div>Uses of mathematics</div><div>Famous mathematicians</div><div>←————→</div><div>Careers and mathematics in the workplace</div></div>			
EARLY LEVEL	FIRST LEVEL	SECOND LEVEL	
No Experiences and Outcomes at Early Level.	number systems  Topic specific vocabulary is encouraged during the teaching of these experiences and outcomes.	construction STEM  Topic specific vocabulary is encouraged during the teaching of these experiences and outcomes.	
THIRD LEVEL	FOURTH LEVEL		
Topic specific vocabulary is encouraged during the teaching of these experiences and outcomes.	Topic specific vocabulary is encouraged during the teaching of these experiences and outcomes.		

Curriculum Organiser	Number, Money and Measure - Mathematics and its Impact on the World, Past, Present and Future	
Milestone/s		
EARLY LEVEL		
No Experiences and Outcomes at Early Level		
Curriculum Organiser	Number, Money and Measure - Mathematics and its Impact on the World, Past, Present and Future	
Milestone/s	Mathematics in the Environment; Numbers through History; Uses of Mathematics	
FIRST LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	I have discussed the important part that numbers play in the world and explored a variety of systems that have been used by civilisations throughout history to record numbers. MTH 1-12a	
Progression Through First Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div></div> <ul style="list-style-type: none"><li>• I can describe a variety of ways in which I have used number in real life.</li><li>• I can investigate some number systems which have been used by civilisations throughout history to record numbers.</li><li>• I can share my understanding of a system that has been used by civilisations throughout history to record numbers, for example Early Humans, Egyptians, Roman Numerals.</li></ul>		<ul style="list-style-type: none"><li>• Investigates and shares understanding of the importance of numbers in learning, life and work.</li><li>• Investigates and shares understanding of a variety of number systems used throughout history.</li></ul>
SECOND LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	I have worked with others to explore, and present our findings on, how mathematics impacts on the world and the important part it has played in advances and inventions. MTH 2-12a	
Progression Through Second Level		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<div><div></div></div> <ul style="list-style-type: none"><li>• I can research ways in which mathematics which has played an important role in advancing our world of work, for example in the construction industry and ways in which numeracy and mathematics equips learners with skills for life and work.</li><li>• I have researched jobs/careers where mathematics plays an important part, including STEM subjects and arts and business .</li><li>• I can research ways in which mathematics which has played an important role in advancing inventions now and in the past, for example exploring the binary number system.</li></ul>		<ul style="list-style-type: none"><li>• Researches and presents examples of the impact mathematics has in the world of life and work, for example, the use of triangles in construction.</li><li>• Contributes to discussions on the role of mathematics in the creation of important inventions, now and in the past.</li></ul>

Curriculum Organiser	Number, Money and Measure - Mathematics and its Impact on the World, Past, Present and Future	
Milestone/s	Famous Mathematicians	
THIRD LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	I have worked with others to research a famous mathematician and the work they are known for, or investigated a mathematical topic, and have prepared and delivered a short presentation. MTH 3-12a	
Progression Through Third Level 		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<ul style="list-style-type: none"><li>• I can choose and research famous mathematicians and the work they were known for, and share this research with others, for example Archimedes, Pythagoras, Hypatia, Leibniz, Newton, Gauss, Mandelbrot.</li><li>• I can choose and research a mathematical topic with others and present my findings.</li></ul>		<ul style="list-style-type: none"><li>• Researches and communicates using appropriate mathematical vocabulary and notation, the work of a famous mathematician or a mathematical topic and explains the relevance and impact they have on society.</li></ul>
Curriculum Organiser	Number, Money and Measure - Mathematics and its Impact on the World, Past, Present and Future	
Milestone/s	Famous Mathematicians	
FOURTH LEVEL		
Experience and Outcome for Planning Teaching, Learning and Assessment	I have discussed the importance of mathematics in the real world, investigated the mathematical skills required for different career paths and delivered, with others, a presentation on how mathematics can be applied in the workplace. MTH 4-12a	
Progression Through Fourth Level 		Benchmarks to Support Teachers' Professional Judgement of Achievement of a Level
<ul style="list-style-type: none"><li>• I have worked with others to investigate the role mathematics plays in the workplace and can deliver, with others, a presentation using appropriate technology.</li><li>• I have investigated the mathematical skills required for a range of careers including those in STEM subjects.</li></ul>		<ul style="list-style-type: none"><li>• Contributes to discussions on the role of mathematics in everyday life and in the workplace.</li><li>• Contributes to presentations on the role of mathematics in everyday life and in the workplace.</li><li>• Investigates the mathematical skills required for a range of careers including those in STEM subjects.</li></ul>