

THIRD LEVEL		NUMERACY AND MATHEMATICS			
Experiences and Outcomes		Progression		Benchmarks	
Organiser—Number, money and measure	Estimation and rounding	<p>I can/am able to:</p> <ul style="list-style-type: none"> • Apply my ability to round numbers to 1 and 2 decimal places in a range of contexts • Use the context of the problem to decide on a suitable degree of accuracy e.g. money problems rounding to 2 decimal places • Use my knowledge of estimation to solve problems 	<p>I can/am able to:</p> <ul style="list-style-type: none"> • Round numbers to 3 decimal places • Explain my choice of strategy through my knowledge of estimation 	<p>I can/am able to:</p> <ul style="list-style-type: none"> • Apply my ability to round numbers to 3 decimal places in context • Estimate answers routinely by rounding 	<ul style="list-style-type: none"> • Round decimal fractions to three decimal places. • Uses rounding to routinely estimate the answers to calculations.
		<p><i>I can round a number using an appropriate degree of accuracy, having taken into account the context of the problem.</i></p> <p><i>MNU 3-01a</i></p>			



THIRD LEVEL		NUMERACY AND MATHEMATICS			
Experiences and Outcomes		Progression		Benchmarks	
Organiser—Number, money and measure Number and number processes	<p><i>I can use a variety of methods to solve number problems in familiar contexts, clearly communicating my processes and solutions.</i></p> <p>MNU 3-03a</p> <p>Links to MNU 3-07a, MTH 3-07b, & 3-07c & MNU 3-08a</p> <p><i>I can continue to recall number facts quickly and use them accurately when making calculations</i></p> <p>MNU 3-03b</p> <p><i>I can use my understanding of numbers less than zero to solve simple problems in context.</i></p> <p>MNU 3-04a</p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> Recall & apply multiplication and division facts for all tables from 1 to 10 Build on table facts to explore links to 11 and 12 times tables. Explain & use a range of mental strategies to solve problems with whole numbers & decimal fractions (with up to 2 decimal places). In addition to mental strategies, use column methods to solve problems with whole numbers & decimal fractions (with up to 2 decimal places). Explore the use of a calculator to solve problems with whole numbers & decimal fractions (with up to 2 decimal places). Add or subtract negative numbers with or without a number line to solve simple problems Explore multiplication involving positive and negative whole numbers Explore division involving positive and negative whole numbers Explore the rules for multiplication & division of integers e.g. same sign = positive; different sign = negative 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Use multiplication and division facts for tables 11 and 12. Explain & use a range of mental strategies to solve problems with whole numbers & decimal fractions (with up to 3 decimal places). In addition to mental strategies, use column methods to solve problems with whole numbers & decimal fractions (with up to 3 decimal places). Explore the use of a calculator to solve problems with whole numbers & decimal fractions (with up to 3 decimal places). Call on a range of methods to solve addition and subtraction problems involving negative numbers Solve multiplication problems in familiar contexts involving integers Solve division problems in familiar contexts involving integers Recall and apply the rules for multiplication & division of integers to solve simple problems 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Recall quickly and use multiplication and division facts accurately when making Call on a range of mental strategies to solve problems in familiar contexts and communicate my processes and solutions clearly. Call on a range of methods to solve problems in familiar contexts and communicate my processes and solutions clearly. 	<ul style="list-style-type: none"> Recalls quickly multiplication and division facts to the 10th multiplication table Uses multiplication and division facts to the 12th multiplication Solve addition and subtraction problems working with whole numbers and decimal fractions to three decimal places. Solves addition and subtraction problems working with integers Solves multiplication and division problems working with whole numbers and decimal fractions to three decimal places. Solves multiplication and division problems working with integers.

THIRD LEVEL		NUMERACY AND MATHEMATICS			
Experiences and Outcomes		Progression		Benchmarks	
Organiser—Number, money and measure	<p>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</p> <p>MTH 3-05a</p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> Using concrete materials, pictorial representations, knowledge of tables etc. find common multiples of a small set of numbers. Using concrete materials, pictorial representations, knowledge of tables etc. find the common factors of a small set of numbers. 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Identify the lowest common multiple of a set of numbers & explain my methods Identify the highest common factor of a set of numbers & explain my methods 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Solve problems relating to multiples, common multiples & lowest common multiples Solve problems relating to factors, common factors & highest common factors 	<ul style="list-style-type: none"> Identify common multiples, including the lowest common multiple for whole numbers and can explain method used. Identifies common factors, including the highest common factor for whole numbers and can explain method used.
	<p>I can apply my understanding of factors to investigate and identify when a number is prime.</p> <p>MTH 3-05b</p>	<ul style="list-style-type: none"> Use my knowledge of factors to define & identify prime numbers to 100. 	<ul style="list-style-type: none"> Use my knowledge of factors to define & identify prime numbers greater than 100 Use pictorial representation such as a factor tree to identify prime factors 	<ul style="list-style-type: none"> Solve problems relating to prime numbers Write a given number as a product of prime factors 	<ul style="list-style-type: none"> Identifies prime numbers to 100 and can explain method used. Solves problems using multiples and factors. Writes a given number as a product of its prime factors.

THIRD LEVEL		NUMERACY AND MATHEMATICS			
Experiences and Outcomes		Progression		Benchmarks	
Organiser—Number, money and measure	Powers and roots	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	I can/am able to:	I can/am able to:	I can/am able to:
		<ul style="list-style-type: none"> Understand the pattern/sequence in powers e.g., $2^2 = 2 \times 2$, $2^3 = 2 \times 2 \times 2$, $2^4 = 2 \times 2 \times 2 \times 2$ etc. Use the notation & vocabulary of powers having explored the advantages of writing numbers in this form. 	<ul style="list-style-type: none"> Evaluate whole number powers using a mental calculation strategy Use a calculator or other technology to evaluate whole number powers. 	<ul style="list-style-type: none"> Solve problems with whole number powers, choosing the appropriate notation and calculation strategy. 	<ul style="list-style-type: none"> Explains the notation and uses associated vocabulary appropriately, for example, index, exponent and power. Evaluates whole numbers as powers, for example, $2^4 = 16$. Evaluates whole numbers as powers, for example, $27 = 3^3$.

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Organiser—Number, money and measure Fractions, decimal fractions and percentages	<p><i>I can solve problems by carrying out calculations with a wide range of fractions, decimal fractions and percentages, using my answer to make comparisons and informed choices for real-life situations.</i></p> <p>MNU 3-07a</p> <p>Please note ideally MTH 3-07c should be taught before MTH 3-07b</p> <p>By applying my knowledge of equivalent fractions and common multiples, I can add and subtract commonly used fractions.</p> <p>MTH 3-07b</p> <p>Having used practical, pictorial and written methods to develop my understanding, I can convert between whole or mixed numbers and fractions</p> <p>MTH 3-07c</p> <p><i>I can show how quantities that are related can be increased or decreased proportionally and apply this to solve problems in everyday contexts.</i></p> <p>MNU 3-08a</p> <p>Link to MNU 3-03a</p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> Convert between common fractions, decimals and percentages. Solve simple comparison or informed choice type questions using my knowledge of fraction, decimal & percentage conversion to justify my choices. Recall and apply prior learning to add and subtract fractions with like denominators. Add and subtract mixed number and improper fractions with like denominators. Through practical, pictorial or written methods, convert between whole or mixed numbers and improper fractions without a calculator. Investigate and discuss quantities that are related/have a relationship either through proportion or ratio e.g. mixing paint colours, diluting juice etc. Through exploration, understand the relationship between fractions, proportion & ratio. Express quantities as a ratio & simplify the ratio where appropriate 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Convert between any fraction, decimal and percentage e.g. 7%, 0.65 etc. Solve comparison or informed choice type questions using my knowledge of fraction, decimal & percentage conversion to justify my choices. Recall and apply prior learning to find common denominators when adding and subtracting fractions with different denominators. Add and subtract mixed number and improper fractions with different denominators. Convert between whole or mixed numbers and improper fractions in any calculation, with or without a calculator. Explore the constant of proportionality i.e. the value that links/relates the quantities Solve simple problems involving direct proportion e.g. cost of 5 items compared to cost of 7 Share an amount in a given ratio 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Solve real life problems with a range of fractions, decimal fractions and percentages including finding a fraction or percentage of a quantity (with/without a calculator). In real life problems, add and subtract fractions including mixed numbers and improper and with any denominator. In real life problems involving fractions, apply conversion skills & knowledge. Solve real life problems that include quantities that increase & decrease proportionally using multiplication & division skills Use ratio to solve real life problems 	<ul style="list-style-type: none"> Converts fractions, decimal fractions or percentages into equivalent fractions, decimal fractions or percentages Uses knowledge of fractions, decimal fractions and percentages to carry out calculations with and without a calculator. Adds and subtracts whole numbers and fractions, including when changing a denominator. Converts between whole or mixed numbers, improper fractions and decimal fractions Solves problems in which related quantities are increased or decreased proportionally 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'.



THIRD LEVEL		NUMERACY AND MATHEMATICS				
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Organiser—Number, money and measure	Money	<p>When considering how to spend my money, I can source, compare and contrast different contracts and services, discuss their advantages and disadvantages, and explain which offer best value to me.</p> <p><i>MNU 3-09a</i></p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> Investigate & explain what certain financial terms are or mean, e.g. debit/credit, APR, pa, direct debit/standing order Use the internet and other sources to find goods & services, compare them & discuss their advantages & disadvantages Explore simple interest and VAT & use my knowledge of fractions, decimals & percentages to calculate both 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Given real life problems involving financial conditions/constraints on a budget, demonstrate best value in goods and services when sticking to this budget Explore compound interest & use my knowledge of fractions, decimals & percentages to calculate this 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Through a range of real-life contexts, budget effectively by making best value decisions for specific personal financial situations, sharing and justifying choices 	<ul style="list-style-type: none"> Demonstrates understanding of best value in relation to contracts and services when comparing products. Chooses the best value for their personal situation and justifies choices. Budgets effectively, using digital technology where appropriate, showing development of financial capacity.
	<p>I can budget effectively, making use of technology and other methods, to manage money and plan for future expenses.</p> <p><i>MNU 3-09b</i></p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> Investigate future expenses and how to plan/budget for them e.g. Christmas costs, planning for a holiday, buying a car etc. Investigate and give examples of different currencies used in other countries Convert between different currencies using up to date currency rates 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Use technology and other methods in real life scenarios to keep a budget including planning for an event e.g. planning a holiday Solve problems involving currency exchange in a context 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Through a range of real life contexts, plan personal spending & budget in a responsible way (including planning for any future expenses) 	<ul style="list-style-type: none"> Demonstrates knowledge of financial terms, for example, debit/credit, APR, pa, direct debit/standing order and interest rate. Converts between different currencies 	



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Organiser—Number, money and measure	Time	<p>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.</p> <p><i>MNU 3-10a</i></p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> Use the formula which links speed, distance and time to calculate how long a journey will take, the speed travelled at or a distance covered (whole numbers only) Interpret distance/time graphs and timelines for simple time periods 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Convert time into common fractions and decimal fractions of time e.g. $\frac{1}{2}$, 0.5, $\frac{1}{4}$, 0.25, $\frac{3}{4}$, 0.75 Calculate & measure time durations across hours and days 	<p>I can/am able to:</p> <ul style="list-style-type: none"> In real life contexts, with simple time periods, apply my knowledge of the relationship & formula linking speed, distance and time to find each of the three variables 	<ul style="list-style-type: none"> Applies knowledge of the relationship between speed, distance and time to find each of the three variables. Calculates time durations across hours and days



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Organiser—Number, money and measure Measurement	<p><i>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.</i></p> <p>MNU 3-11a</p> <p>Link to MNU 3-01a & 3-07a</p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> Apply my knowledge of measure to detect unrealistic estimates or measurements. Ensure units are consistent across problems/tasks by converting between units. Choose the degree of accuracy (decimal places) to work with when applying my knowledge of measure Use my knowledge of measurement & formula to find the area of 2D shapes where the units are different Use my knowledge of measurement & formula to find the volume of cubes and cuboids in practical problems Investigate & explore the different ways to find the area of composite shapes made from squares, rectangles & triangles Investigate & explore the different ways to find the volume of compound 3D objects made from cubes & cuboids 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Choose the appropriate degree of accuracy (to 3 decimal places) & units when solving practical problems by considering the information given or instrument used Solve practical problems involving length, capacity, volume & area including where conversion between standard units to 3 decimal places is required Use my knowledge of formula to calculate an unknown length given an area Use my knowledge of formula for cubes & cuboids to calculate an unknown length given a volume Calculate the area of composite shapes made from squares, rectangles & triangles & record with appropriate units Calculate the volume of compound 3D objects made from squares, cubes & cuboids & record with appropriate units 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Solve real life practical problems involving area of 2D shapes Solve real life practical problems involving volume of cubes and cuboids Solve real life practical problems involving the area of compound 2D shapes Solve real life practical problems involving the volume of compound 3D objects 	<ul style="list-style-type: none"> Choose appropriate units for length, area and volume when solving practical problems. Converts between standard units to three decimal places and applies this when solving calculations of length, capacity, volume and area. Calculates the area of a 2D shape where the units are inconsistent. Finds the area of compound 2D shapes constructed from squares, rectangles and triangles. Finds the volume of compound 3D objects constructed from cubes and cuboids.
	<p>Having investigated different routes to a solution, I can find the area of compound 2D shapes and the volume of compound 3D objects, applying my knowledge to solve practical problems</p> <p>MTH 3-11b</p>				



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Organiser—Number, money and measure	Mathematics —its impact on the world, past, present and future	I can/am able to:	I can/am able to:	I can/am able to:	<ul style="list-style-type: none"> 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, now and in the past.
		<ul style="list-style-type: none"> Independently or with others, choose & research famous mathematicians, the work they were known for & share this research with others e.g. Archimedes, Emmy Noether, Pythagoras, Hypatia, Leibnitz, Newton, Gauss etc. Independently or with others, investigate a mathematical topic e.g. statistics, trigonometry, algebra etc. explaining relevance and impact & present my findings 			

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Organiser—Number, money and measure	Patterns and relationships	Having explored number sequences, I can establish the set of numbers generated by a given rule for a given sequence, expressing it using appropriate notation.	MTH 3-13a	I can/am able to:	I can/am able to:	I can/am able to:	I can/am able to:	I can/am able to:	I can/am able to:
		<ul style="list-style-type: none"> • Generate number sequences from a given rule • Extend a given pattern (including patterns in tabular form) • Recognise relationships between consecutive terms in a number sequence and use this to write a rule (include linear patterns) 	<ul style="list-style-type: none"> • Use a rule for a sequence to calculate the value of any given element in the pattern • Record, using algebraic notation, an expression which describes the rule for a given sequence 	<ul style="list-style-type: none"> • Solve simple sequences problems in context that involve whole number powers & include linear patterns 	<ul style="list-style-type: none"> • Generates number sequences from a given rule, for example, $T = 4n + 6$. • Extends a given pattern and describes the rule. • Expresses sequence rules in algebraic notation, for example, the cost of hiring a car is £75 plus a charge of £0.05 per mile, 'm' driven, $C = 0.05m + 75$. 				

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Organiser—Number, money and measure	Expressions and equations	<p>I can collect like algebraic terms, simplify expressions and evaluate using substitution</p> <p>MTH 3-14a</p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> Collect like terms to simplify an expression for additive and multiplicative terms Substitute to evaluate expressions involving at least 2 variables using positive values 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Collect like terms (up to cubic terms) to simplify any algebraic expression Substitute to evaluate expressions & formulae for positive and negative values 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Evaluate expressions & formulae that include simple powers e.g. squares and cubes 	<ul style="list-style-type: none"> Collects like terms, including squared terms, to simplify an algebraic expression. Evaluates expressions involving two variables using both positive and negative numbers. Solves linear equations, for example, $ax \pm b = c$ where a, b and c are integers.
		<p>Having discussed ways to express problems or statements using mathematical language, I can construct, and use appropriate methods to solve, a range of simple equations.</p> <p>MTH 3-15a</p> <p>I can create and evaluate a simple formula representing information contained in a diagram, problem or statement.</p> <p>MTH 3-15b</p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> Solve a given simple linear equation using inverses/opposite operations and/or by balancing e.g. solve $2x - 4 = 14$ Express a problem or statement in words/mathematical language Given information in a diagram, express a simple formula in words/mathematical language 	<p>I can/am able to:</p> <ul style="list-style-type: none"> From given information, express a problem or statement as an equation or expression From given information in a diagram, express a simple formula as an expression 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Solve problems involving linear equations using the most appropriate method where the equation is given or has to be constructed 	<ul style="list-style-type: none"> Creates a simple linear formula representing information contained in a diagram. Evaluates a simple formula for example, $C = 0.05m + 75$

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Organiser—Shape, position and movement Properties of 2D shapes and 3D objects	Having investigated a range of methods, I can accurately draw 2D shapes using appropriate mathematical instruments and methods MTH 3-16a Link to MNU 3-19a	I can/am able to: <ul style="list-style-type: none"> Apply previous learning to accurately draw 2D shapes using the appropriate mathematical instrument and method Use the formula linking the radius and diameter of a circle (i.e. $r = 0.5d$ and $d = 2r$) to support the accurate drawing of a circle 	I can/am able to: <ul style="list-style-type: none"> Investigate and explore different methods to draw triangles and quadrilaterals accurately Accurately draw triangles and quadrilaterals using the appropriate mathematical instrument and method (identified through the given information within the task or problem) 	I can/am able to: <ul style="list-style-type: none"> Investigate and explore methods to draw regular polygons accurately (given the interior angle) Accurately draw regular polygons when given the interior angle using the appropriate mathematical instrument and method (identified through the given information within the task or problem) 	<ul style="list-style-type: none"> Demonstrates a variety of methods to accurately draw 2D shapes, including triangles and regular polygons (given the interior angle), using mathematical instruments.

THIRD LEVEL		NUMERACY AND MATHEMATICS			
Experiences and Outcomes		Progression		Benchmarks	
Organiser—Shape, position and movement Angle, symmetry and transformation	<p>I can name angles & find their sizes using my knowledge of the properties of a range of 2D shapes & the angle properties associated with intersecting & parallel lines</p> <p>MTH 3-17a</p> <p>Having investigated navigation in the world, I can apply my understanding of bearings & scale to interpret maps and plans & create accurate plans & scale drawings of routes & journeys.</p> <p>MTH 3-17b</p> <p>I can apply my understanding of scale when enlarging or reducing pictures & shapes, using different methods, including technology</p> <p>MTH 3-17c</p> <p>I can use my knowledge of the coordinate system to plot & describe the location of a point on a grid.</p> <p>MTH 3-18a</p> <p>I can illustrate the lines of symmetry for a range of 2D shapes & apply my understanding to create & complete symmetrical pictures & patterns.</p> <p>MTH 3-19a</p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> Discover & recall that the sum of the 3 angles of a triangle adds to 180° Discover & recall that the angles around a point add to 360° Use known angle facts to calculate missing angles in simple problems Name angles using appropriate notation e.g. $\angle ABC$, where the angle at the vertex is the letter in the middle Investigate and explore how maps and plans are used in navigation Measure bearings on a map or plan. Measure & read distance from a scale map or plan. Draw any bearing Investigate & explore, through practical activities & technology, how pictures and shapes can be enlarged or reduced Understand that a scale factor is a relationship between corresponding elements on a shape or picture e.g. <i>corresponding sides</i> Understand that a fractional scale factor can create a reduction. Apply previous and new learning relating to negative numbers & integers to explore the coordinate system outwith the 1st quadrant Apply previous and new learning relating to 2D shape to identify & draw all lines of symmetry on a wider range of 2D shapes Complete symmetrical pictures & patterns with or without digital technologies. 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Explore & investigate vertically opposite angles, corresponding angles and alternate angles through intersecting and parallel lines Recall angle facts & properties relating to vertically opposite angles, corresponding angles and alternate angles Apply previous and new learning of scale to draw routes or journeys as a simple scaled map or plan I can calculate bearings & distances from a scale map or plan. Draw bearings onto a map or plan to plot a route or journey. With or without technology, enlarge and reduce objects, including pictures and shapes, by applying my knowledge of scale using simple scale factors Identify a linear scale factor by expressing the relationship between corresponding elements in tabular form With support, plot & describe the location of a point on a grid outwith the 1st quadrant i.e. <i>within 4 quadrants</i> With support reflect a 2D shape in the x-axis or y-axis Begin to create symmetrical pictures & patterns with or without digital technologies. 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Use known angle facts to calculate missing angles in simple problems including intersecting and parallel lines Use known angle facts to calculate missing angles in real life problems including triangles & quadrilaterals Create a scale map or plan & record routes or journeys with bearings & distances. With or without technology, enlarge and reduce objects, including pictures and shapes, by applying my knowledge of scale Plot & describe the location of a point on a grid outwith the 1st quadrant i.e. <i>within 4 quadrants</i> Reflect a 2D shape in the x-axis or y-axis Create symmetrical pictures & patterns with or without digital technologies. 	<ul style="list-style-type: none"> Names angles using mathematical notation, for example, $\angle ABC$ Identifies corresponding, alternative and vertically opposite angles and uses this knowledge to calculate missing angles. Uses the angle properties of triangles and quadrilaterals to find missing angles Applies knowledge and understanding of scale to enlarge and reduce objects in size showing understanding of linear scale factor. Uses bearings in a navigational context, including creating scale drawings. Identifies all lines of symmetry in 2D shapes Creates symmetrical patterns and pictures.

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Organiser—Information handling	Data and analysis	<p>I can work collaboratively, making appropriate use of technology, to source information presented in a range of ways, interpret what it conveys and discuss whether I believe the information to be robust, vague or misleading.</p> <p><i>MNU 3-20a</i></p> <p>When analysing information or collecting data of my own, I can use my understanding of how bias may arise and how sample size can affect precision, to ensure that the data allows for a fair conclusions to be drawn.</p> <p><i>MTH 3-20b</i></p>	<p>I can/am able to:</p> <ul style="list-style-type: none"> With or without technology, working with others or on my own, find and/or collect information in text and/or numerical & pictorial form from a variety of sources Calculate the mean & range of a data set (sourced or given) and use this to interpret the information displayed 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Investigate and explore what is meant by a trend in data Using sourced or given data, use appropriate language to discuss any trends in data. Apply my knowledge of bias and appropriate sample size when analysing given data to ensure that the data is reliable and robust Identify whether given data is reliable and robust or not, justifying my conclusions 	<p>I can/am able to:</p> <ul style="list-style-type: none"> Interpret, describe and discuss the important features of a data set (sourced or given) and discuss whether I believe the information to be robust, vague or misleading. Apply my knowledge of bias and appropriate sample size when collecting data to ensure that the data is reliable and robust e.g. use a <i>representative sample</i> Identify whether my collected data is reliable and robust or not, justifying my conclusions 	<ul style="list-style-type: none"> Sources information or collects data making use of digital technology where appropriate. Interprets data sourced or given. Describes trends in data using appropriate language, for example, increasing trend. Determines if information is robust, vague or misleading by considering, for example, the validity of the source, scale used, sample size, method of presentation and appropriateness of how the sample was selected. Collects data by choosing a representative sample to avoid bias.
		<p>I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.</p> <p><i>MTH 3-21a</i></p>	<ul style="list-style-type: none"> Apply previous learning to organise and display a variety of data appropriately to solve problems (with or without technology) 	<ul style="list-style-type: none"> Apply knowledge of fractions, decimals, percentages & angles to construct pie charts (not pre-sectioned) Interpret data represented in pie charts (not pre-sectioned) and discuss using appropriate language 	<ul style="list-style-type: none"> With or without technology, construct compound bar graphs and line graphs to organise and display data Interpret data represented in compound bar graphs and line graphs and discuss using appropriate data 	<ul style="list-style-type: none"> Organises and displays data appropriately in a variety of forms, for example, compound bar and line graphs and pie charts, making effective use of technology as appropriate.

THIRD LEVEL		NUMERACY AND MATHEMATICS			
Experiences and Outcomes		Progression		Benchmarks	
Organiser—Information handling Ideas of chance and uncertainty	<p><i>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.</i></p> <p>MNU 3-22a</p>	<p>For a range of purposes across my learning I can/am able to:</p> <ul style="list-style-type: none"> • Use a number line from 0 to 1 (showing impossible to certain) to investigate & describe probability. • Place events on a number line to demonstrate simple probabilities as a fraction or decimal fraction e.g. the probability that you flip a coin & it lands heads up is 0.5. • Define probability as the number of favourable outcomes ÷ the total number of outcomes. • Determine probability of a simple or real life event e.g. being first up in the morning • Calculate the probability that an event will not happen. • Investigate and discuss real life situations where probability is used e.g. sport and gambling 	<p>For a range of purposes across my learning I can/am able to:</p> <ul style="list-style-type: none"> • Use a given probability to calculate an expected outcome. • Determine all possible outcomes from a single event and calculate the probability of each • Understand the term “mutually exclusive”. • Discuss & demonstrate how the probability of an event can be used to make real life decisions e.g. a video post going viral has a higher probability if it includes a funny animation 	<p>For a range of purposes across my learning I can/am able to:</p> <ul style="list-style-type: none"> • Use experiments & practical activities to make links between the frequency of an event occurring and the probability of the event occurring. • Investigate and discuss information collected in the past to make predictions or risk assessments for the future e.g. use of medical data to look at probability of measles outbreak in areas where vaccinations have decreased etc. 	<ul style="list-style-type: none"> • <i>Uses the probability scale of 0 to 1 showing probability as a fraction or decimal fraction.</i> • <i>Demonstrates understanding of the relationship between the frequency of an event happening and the probability of it happening.</i> • <i>Uses a given probability to calculate an expected outcome, for example, ‘the probability of rain in June is 0.25 so how many days do we expect it to rain?’</i> • <i>Calculates the probability of a simple event happening, for example, ‘what is the probability of throwing a prime number on a 12 sided die?’.</i> • <i>Identifies all of the mutually exclusive outcomes of a single event and calculates the probability of each.</i> • <i>Investigates real-life situations which involve making decisions on the likelihood of events occurring and consequences involved.</i>