Curriculum for Wales	AoLE Focus	Mathematics and Numeracy
	Our School Curriculum Vision	Within the Taff Bargoed Learning Partnership, our learners will be provided with experiences that will allow them to; achieve their potential with their mathematics and numeracy skills. Our learners will experience a sense of pride and achievement as they solve a problem, discover different solutions and strategies, and apply their skills independently through authentic contexts. Our learners will gain a deep understanding of the subject, explored through a range of concepts/contexts, which ensures they fully understand and engage with what they are learning, and develop as numerate individuals, able to apply their skills in their everyday lives.
	Progression Step	2

Knowledge – 'Learn ABOUT'			Experience – 'Learn FROM'
Within our Curriculum, a focus is given to Pupil interest in contributing to the learning that is taking place, in order to develop a child-centred approach. However there is a range of expected knowledge & experience that we aim to develop Pupils Skills through.			Pupils will be provided with an opportunity to experience:-

In Year 2, Pupils will learn about…	In Year 3, Pupils will learn about…	In Year 4, Pupils will learn about…	
- transfer mathematical skills to play and classroom activities - identify steps to complete the task or reach a solution - select appropriate mathematics and techniques to use - select and use relevant number facts and mental strategies - select appropriate equipment and resources - use knowledge and practical experience to inform estimations - use everyday and mathematical language to talk about their own ideas and choices - present work orally, pictorially and in written form, and use a variety of ways to represent collected data - devise and refine informal, personal methods of recording, moving to using words and symbols in number sentences - use checking strategies to decide if answers are reasonable - interpret answers within the context of the problem and consider whether answers are sensible - interpret information presented in charts and diagrams and draw appropriate conclusions	- Identifying processes and connections to *transfer mathematical skills to a variety of contexts and everyday situations* *identify the appropriate steps and information needed to complete the task or reach a solution* *select appropriate mathematics and techniques to use* *select and use suitable instruments and units of measurement* *choose an appropriate mental or written strategy and know when it is appropriate to use a calculator* *estimate and visualise size when measuring and use the correct units* - Represent and communicate by *explaining results and procedures clearly using mathematical language* *refining informal methods of recording written calculations, moving to formal methods of calculation when developmentally ready* *using appropriate notation, symbols and units of measurement* *selecting and constructing appropriate charts, diagrams and graphs with suitable scales* - Review by *selecting from an increasing range of checking strategies to decide if answers are reasonable* *interpreting answers within the context of the problem and consider whether answers, including calculator, analogue and digital displays, are sensible* *drawing conclusions from data and recognise that some conclusions may be misleading or uncertain*	- Identifying processes and connections to *transfer mathematical skills to a variety of contexts and everyday situations* *identify the appropriate steps and information needed to complete the task or reach a solution* *select appropriate mathematics and techniques to use* *select and use suitable instruments and units of measurement* *choose an appropriate mental or written strategy and know when it is appropriate to use a calculator* *estimate and visualise size when measuring and use the correct units* - Represent and communicate by *explaining results and procedures clearly using mathematical language* *refining informal methods of recording written calculations, moving to formal methods of calculation when developmentally ready* *using appropriate notation, symbols and units of measurement* *selecting and constructing appropriate charts, diagrams and graphs with suitable scales* - Review by *selecting from an increasing range of checking strategies to decide if answers are reasonable* *interpreting answers within the context of the problem and consider whether answers, including calculator, analogue and digital displays, are sensible* *drawing conclusions from data and recognise that some conclusions may be misleading or uncertain*	- Mathematics in the real world including the world of work and design where numeracy play an integral part - Take part in maths activities of a collaborative natures, including across Cluster and regions - Engage in practical mathematics activities, being provided with a range of concrete, abstract and pictorial resources - Develop and consolidate skills through reasoning and problem solving in a range of contexts - Visits to and from people who use mathematics in their everyday lives - Identify mathematics in the world around them - Take part in STEM based activities; identifying how mathematics can be used in science and engineering based tasks - Balance of practical and written methods of solving problems and calculations - Be provided with an opportunity to use a wide range of mathematical equipment, and number based resources

SKILLS – 'Learn TO'				
LNF Links		The Number System, Relationships within the Number System, Calculation		
Through our Curriculum for **Mathematics and Numeracy,** *our pupils will develop as* **Ambitious, Capable Learners**, **Healthy confident Individuals**, **Ethical, informed Citizens** & **Enterprising, Creative contributors.** *Enrichment and Experiences within this AoLE, at our School, will include opportunities for Pupils to;*				

WMS		Descriptions of Learning	What this looks like in **YEAR 2**:	What this looks like in **YEAR 3**:	What this looks like in **YEAR 4**:
The number system is used to represent and compare relationships between numbers and quantities	Through opportunities to;	(2.1)I can read, write and interpret larger numbers, up to at least 1000, using digits and words.	▪ read and write numbers to at least 100 ▪ read and write number words to 100 ▪ recite numbers beyond 100, forwards and backwards and from different starting points	▪ read and write numbers to 1 000	▪ read and write number words to 10 000
		(2.2)I can understand that the value of a number can be determined by the position of the digits.	▪ demonstrate an understanding of place value up to at least 100 ▪ partition 2-digit numbers and know the value of each digit ▪ use and record ordinal numbers in practical situations	▪ explain the value of a digit in numbers up to 1 000	• identify negative whole numbers on a number line
		(2.3)I have engaged in practical tasks to estimate and round numbers to the nearest 10 and 100.			▪ estimate by rounding to the nearest 10 or 100
		(2.4)I am beginning to estimate and check the accuracy of my answers, using inverse operations when appropriate.	▪ use checking strategies: – repeat addition in a different order – use halving and doubling within 20	▪ compare and estimate with numbers up to 100 ▪ check subtraction using addition ▪ check halving using doubling ▪ check multiplication using repeated addition	▪ compare and estimate with numbers up to 1 000 ▪ check answers using inverse operations
		(2.5)I can order and sequence numbers, including odd and even numbers, and I can count on and back in step sizes of any whole number and simple unit fractions.	▪ count sets of objects by grouping in 2s, 5s or 10s ▪ compare and order 2-digit numbers ▪ recognise and understand odd and even numbers up to 100	▪ identify odd and even numbers up to 1 000	▪ order whole numbers between -10 and 10
		(2.6)I am beginning to understand that unit fractions represent equal parts of a whole and are a way of describing quantities and relationships.		▪ use halves and quarters ▪ find fractional quantities linked to known multiplication facts, e.g. 1/3 of 18, 1/5 of 15	▪ find fractional quantities using known table facts, e.g. 1/6 of 30cm

(2.7)I have experienced fractions in practical situations, using a variety of representations.	▪ find halves and quarters in practical situations	▪ halve 2-digit numbers in the context of number, money and measures	▪ • halve 3-digit numbers in the context of number, money and measures
(2.8)I have explored equivalent fractions and understand equivalent fraction relationships.		▪ recognise a quarter as a half of a half	▪ recognise fractions that are several parts of a whole, e.g. 2/3 , 3/10 ▪ use understanding of simple fraction and decimal equivalences
(2.9)I have explored additive relationships, using a range of representations. I can add and subtract whole numbers, using a variety of written and mental methods.	▪ mentally add 10 or 20 to a given number up to 100 ▪ mentally subtract 10 or 20 from a given number up to 100 ▪ find small differences within 20 by using 'counting on' strategies ▪ use mental recall of number facts to 10 and place value to add or subtract larger numbers, e.g. 24 + 4, 30 + 5, 34 + 10	▪ use mental strategies to recall number facts within 20 ▪ find differences within 100 ▪ use mental strategies to add and subtract 2-digit numbers	▪ find differences within 1 000 ▪ add a 2-digit number to, and subtract a 2-digit number from, a 3-digit number using an appropriate mental or written method
(2.10)I can use my understanding of multiplication to recall some multiplication facts and tables starting with tables 2, 3, 4, 5 and 10 and I can use the term 'multiples'.	▪ count on in 2s, 5s and 10s from any given number ▪ recall and use 2, 5 and 10 multiplication tables ▪ use mental recall of number facts to 10 to derive other facts, i.e.: – doubling and halving, e.g. derive 40 + 40 from knowing 4 + 4 – bonds of 10, e.g. derive 60 + 40 from knowing 6 + 4	▪ recall 2, 3, 4, 5 and 10 multiplication tables and use to solve multiplication and division problems ▪ identify multiples of 2, 3, 4, 5 and 10; use the term multiple	▪ identify multiples of 2, 3, 4, 5, 6 and 10; use the terms multiple and factor ▪ use mental strategies to recall multiplication tables for 2, 3, 4, 5, 6 and 10 and use to solve division problems
(2.11)I have explored and can use my understanding of multiplicative relationships to multiply and divide whole numbers, using a range of representations, including sharing, grouping and arrays.	▪ recall doubles up to 20 ▪ begin to link multiplication with simple division, e.g. grouping and sharing in 2s, 5s and 10s	▪ multiply numbers by 10 ▪ use partitioning to double and halve 2-digit numbers	▪ multiply and divide numbers by 10 and 100 ▪ use mental strategies to multiply and divide 2-digit numbers by a single digit number
(2.12)I can understand the equivalence and value of coins and notes to make appropriate transactions in role play.	▪ use different combinations of money to pay for items up to £1 ▪ find totals and give change from multiples of 10p	▪ use different combinations of money to pay for items up to £2 and calculate the change ▪ order and compare items up to £10 ▪ record money spent and saved	▪ use money to pay for items up to £10 and calculate the change in role play activities ▪ order and compare items up to £100 ▪ add and subtract totals less than £10 using correct notation, e.g. £6.85 – £2.76 ▪ manage money, compare costs from different retailers and determine what can be bought within a given budget

LNF Links	N/A

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What Matters Statement		Descriptions of Learning	What this looks like in **YEAR 2**:	What this looks like in **YEAR 3**:	What this looks like in **YEAR 4**:
Algebra uses symbol systems to express the structure of mathematical relationships.	Through opportunities to;	(2.13)I have explored patterns of numbers and shape.		• explore sequences of whole numbers involving addition and subtraction, e.g. counting in 2s, 3s and 4s from different starting points	• explore sequences of positive whole numbers involving addition and subtraction in 2s, 3s, 4s, 5s, 6s, 8s and 10s from different starting points v •
		(2.14)I can recognise, copy and generate sequences of numbers and visual patterns.	• order and identify patterns in combinations of mathematical objects, including number and number tables, and discuss the relationship between them	• write the next two (or more) terms in sequences that involve addition or subtraction	• write the next two (or more) terms in sequences that involve addition or subtraction v
		(2.15)I can use the equals sign to indicate that both sides of a number sentence have the same value and I can use inequality signs when comparing quantities to indicate 'more than' and 'less than'.		• read statements about numbers expressed using an inequality sign, e.g. 6 > 4 • list numbers that are 'greater than' or 'less than' another number v	• use < > to describe whether a number is less than or greater than another
		(2.16)I have explored commutativity with addition and multiplication and I can recognise when two different numerical expressions describe the same situation but are written in different ways.	•	• use one and two step function machines to generate input and output involving addition and subtraction within 100; express, in words, the operations of function machines	• use one and two step function machines to generate input and output using all four operations; express, in words, the operations of function machines
		(2.17)I can find missing numbers when number bonds and multiplication facts are not complete.	• solve one- and two-step problems that involve addition and subtraction, multiplication and simple division including missing number problems, e.g. 40 – ¨ = 19	• find an 'unknown' in one step equations and use this to derive other facts, e.g. 37 + ¨ = 100 therefore 100 – 37 = ¨	• find an 'unknown' in two step equations, e.g. 4 x ¨ + 1 = 25

LNF Links	Measurement, Shape and Space, Position

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What Matters Statement		Descriptions of Learning	What this looks like in **YEAR 2**:	What this looks like in **YEAR 3**:	What this looks like in **YEAR 4**:
Geometry focuses on relationships involving shape, space and position, and measurement focuses on quantifying phenomena in the physical world.	Through opportunities to;	(2.18)I am beginning to tell the time using a variety of devices.	▪ read hours and minutes on a 12-hour digital clock ▪ read 'half past', 'quarter past' and 'quarter to' on an analogue clock	▪ tell the time to the nearest 5 minutes on an analogue clock and calculate how long it is to the next hour ▪ read hours and minutes on a 12-hour digital clock using am/pm conventions	▪ tell the time to the nearest minute on analogue clocks ▪ read hours and minutes on a 24-hour digital clock ▪ time and order events in seconds • ▪ convert between 12- and 24-hour clock times
		(2.19)I have explored and used different ways of showing the passing of time, including calendars, timelines, simple timetables and schedules.	▪ record the days of the week, the months and seasons of the year	▪ calculate start times, finish times and durations using hours, 30-minute intervals and 15-minute intervals	▪ use calendars to plan events ▪ calculate start times, finish times and durations using 5-minute intervals ▪ estimate the number of minutes everyday activities take to complete
		(2.20)I have explored measuring, using counting, measuring equipment and calculating, and I can choose the most appropriate method to measure.	▪ use standard units to measure: – length, height and distance: metres, half metres or centimetres – weight/mass: kilograms or 10 gram weights – capacity: litres ▪ compare daily temperatures using a thermometer (°C)	▪ take temperature readings using thermometers and interpret readings above and below 0°C	▪ take temperature readings using thermometers and interpret readings above and below 0°C
		(2.21)I can estimate and measure, using non-standard units, before progressing onto standard units.	▪ make a sensible estimate of measurement in length, height, weight and capacity that can be checked using standard measures	▪ choose between metric units to measure a length ▪ use standard units to estimate and measure: – length: measure on a ruler to the nearest ½ cm – weight/mass: use 5g, 10g and 100g weights – capacity: use litres and half litres; measure to the nearest 100m ▪ find areas by counting squares	▪ choose appropriate metric units to measure length, weight/mass and capacity ▪ convert metric units of length to smaller units, e.g. cm to mm, m to cm, km to m ▪ recognise volume in practical contexts
		(2.22)I can use a variety of measuring devices from different starting points.	▪ use symbols related to length, weight/mass and capacity	▪ use standard units to estimate and measure: – length: measure on a ruler to the nearest ½ cm – weight/mass: use 5g, 10g and 100g weights – capacity: use litres and half litres; measure to the nearest 100m	▪ measure on a ruler to the nearest mm and record using a mix of units, e.g. 1cm 3mm ▪ use weighing scales with divisions to weigh objects to the nearest 5g, 10g, 25g or 100g ▪ measure capacities to the nearest 50ml or 100ml

	(2.23)I have explored two-dimensional and three-dimensional shapes and their properties in a range of contexts.	• recognise and name regular and irregular 2D and 3D shapes, understand and use the properties of shape • make increasingly more complex or accurate models with 3D shapes and tessellate 2D shapes •	• recognise that perimeter is the distance around a shape • recognise and classify triangles, squares, rectangles, pentagons and hexagons, including irregular cases • identify congruent shapes • recognise 3D shapes, including prisms	• measure and calculate the perimeter of squares and rectangles • recognise, classify and sketch polygons with up to eight sides, including irregular shapes • recognise and classify 3D shapes, using their own criteria
	(2.24)I have explored reflective symmetry in a range of contexts and I can discuss it as a property of shapes and images.	• identify a line of symmetry for 2D shapes and complete symmetrical pictures	• identify lines of symmetry in 2D shapes • draw horizontal and vertical lines of symmetry	• draw lines of symmetry • draw the reflection of a shape in a horizontal or vertical line
	(2.25)I can describe and quantify the position of objects in relation to other objects.	• use mathematical vocabulary to describe position, direction and movement	• identify right angles • describe an angle as more or less than a right angle • use the four compass points to describe directions	• use a protractor to check if an angle is more or less than a right angle • use eight compass points to describe direction
	(2.26)I have explored the concept of rotation and I am beginning to use simple fractions of a complete rotation to describe turns.	• recognise half and quarter turns, clockwise and anti-clockwise • recognise that a quarter turn is a right angle	• recognise that two right angles make a half turn, and that four right angles make a full turn	

LNF Links	Collecting Data, Representing Data, Interpreting Data

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What Matters Statement		Descriptions of Learning	What this looks like in YEAR 2:	What this looks like in YEAR 3:	What this looks like in YEAR 4:

Statistics represent data, probability models chance, and both support informed inferences and decisions.	Through opportunities to;	(2.27)I can collect and organise data to ask and answer questions in relevant situations.	• gather and record data from:
			  o lists and tables
			  o diagrams
			  o block graphs
			  o pictograms where the symbol represents one unit
				• gather and record data from:
				  o lists and tables
				  o diagrams
				  o block graphs
				  o pictograms where the symbol represents one unit
					• gather and record data from:
					  o lists and tables
					  o diagrams
					  o block graphs
					  o pictograms where the symbol represents one unit

		(2.28)I can sort and classify using more than one criterion, including the use of Venn diagrams and Carroll diagrams.	• sort and classify objects using more than two criterion	• sort and classify objects using Venn and Carroll diagrams	• sort and classify objects using Venn and Carroll diagrams

		(2.29)I am beginning to record and represent data in a variety of ways, including the use of tally charts, frequency tables and block graphs, when appropriate axes and scales are provided.	• gather and record data from:
			  o lists and tables
			  o diagrams
			  o block graphs
			  o pictograms where the symbol represents one unit
				• represent data using:
				  o lists, tally charts, tables and diagrams
				  o bar charts and bar line graphs labelled in 2s, 5s and 10s
				  o pictograms where one symbol represents more than one unit using a key
				  o Venn and Carroll diagrams
					• represent data using:
					  o lists, tally charts, tables and diagrams
					  o bar charts and bar line graphs labelled in 2s, 5s and 10s
					  o pictograms where one symbol represents more than one unit using a key
					  o Venn and Carroll diagrams

		(2.30)I am beginning to interpret and analyse simple graphs, charts and data.	• extract and interpret information from lists, tables, diagrams and graphs	• extract and interpret information from charts, timetables, diagrams and graphs	• extract and interpret information from charts, timetables, diagrams and graphs
		(2.31)I can explain my findings and I am beginning to evaluate how well my method worked.	• order and identify patterns in combinations of mathematical objects, including number and number tables, and discuss the relationship between them	• Begin to explain their workings and evaluate what has gone well in their process • draw conclusions from data	• explain their workings and evaluate what has gone well in their process • draw conclusions from data and recognise that some conclusions may be misleading or uncertain.