Brecknock Maths Progression Document 2022-2023

Subject Statement

The maths curriculum at Brecknock builds and shapes our pupils to be passionate and life-long mathematicians. From understanding the basic principles of one-to-one correspondence to decoding multi-step algebraic problems, we are ambitious to equip students with the skills, depth of knowledge and enthusiasm for mathematics learning, within and beyond the subject.

Knowledgeable Learners

- We will develop fluent mathematicians, who have strong number sense and confidence in problem solving and reasoning through a coherent curriculum.
- Maths teaching delivers all the requirements of the National Curriculum in relation to mathematics curriculum using the DfE advice on curriculum prioritisation.
- Teachers use White Rose and the NCETM curriculum prioritisation documents to ensure that pupils have a firm foundation of all mathematical concepts and are secure in their number knowledge and fact fluency.
- Children have an understanding of how new learning builds upon their prior learning and teachers plan for this using the DfE Mathematics guidance
- Children spend more time thinking deeply about key concepts in order to better understand them and make connections with other areas of the mathematics curriculum.

Confident Communicators

- We will develop children's ability to problem solve and apply their reasoning skills by encouraging pupils to not only decode problems but be curious and seek to inform themselves at a much deeper level.
- Through storytelling, chanting and singing, pupils will explore new mathematical contexts and see the connection between numbers
- Explicit teaching of key new vocabulary forms an integral part of maths lessons
- Sentence stems are used to support children's ability to explain, and allow them the opportunity to practise the new vocabulary
- Our updated reasoning scale (*Add'em scale*), is used throughout maths lessons enabling children to describe, then show their method before moving to explaining concepts and justifying them with mathematical proof.

Active Citizens

- Children are motivated to secure their fluency through regular quizzes, MOT awards and success in the inter-school Autumn and Spring times table slams.
- Exposure to a multitude of strategies, both mental and formal, also encourage our learners to ask themselves what suits their needs best, creating more active and independent mathematicians.
- Continued access to concrete equipment, even for our upper key stage 2 learners, encourages self-directed learning and resilience, ambition and an understanding for those who work in different ways.
- Children have an understanding of how maths shapes the world through a number of projects: maths week, Ada Lovelace Day, census day, STEAM
- Children will be made aware of how mathematics links to the other school subjects, their lives outside of school and the world around them.

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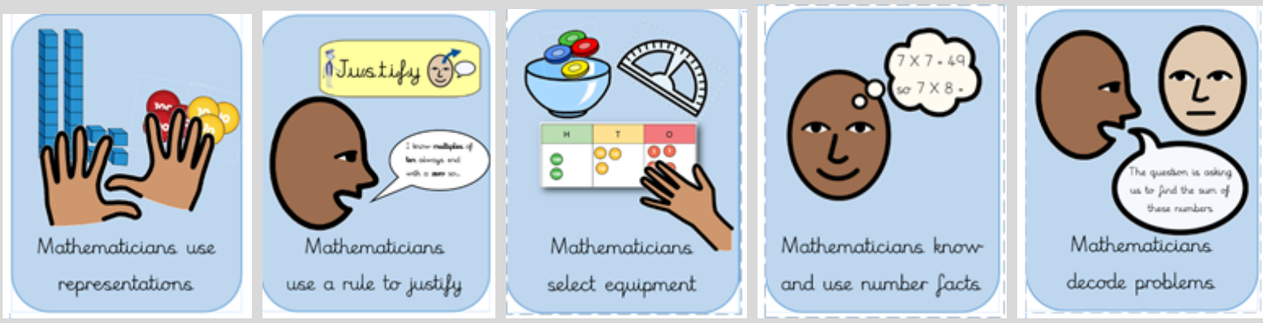
Implementation

- Teachers use White Rose Small Steps and the NCETM curriculum prioritisation documents to ensure that pupils have a firm foundation of all mathematical concepts, are secure in their number knowledge and fact fluency and ready to progress to the next year group. A clear progression of key skills and concepts is mapped.
- KS1 and KS2 planning follows the National Curriculum using the DfE Maths guidance documents to support long-term, medium-term and short-term planning units. As a basis for each unit, they use the supporting resources of the White Rose and NCETM spine materials to help scaffold their lesson into small, coherent steps.
- Learning Journeys show the clear progression of learning in smaller units of work.
- Professional Development Meetings focused on mathematics are held regularly for teachers and support staff to increase the capacity and expertise of all staff.
- EYFS uses the Mastering Number programme alongside the DfE development matters guidance to structure the teaching of mathematics in EYFS.
- A mastery curriculum and approach is consistently implemented in mathematics ensuring every child is learning as a part of the class and teaching is adapted through the use of small steps.
- Assessment is used through: regular low stakes quizzes, retrieval activities, pre and post-unit assessments and end of unit White Rose formal assessments every term. These all inform teacher judgement.
- Regular fluency quizzes and inter school competitions are used to maintain confidence in fluency.
- Teachers have high expectations of all pupils and pupils are expected to be active contributors in lessons using the Reasoning Scale to articulate their thought process
- Equal access to career pathways are promoted. Through our innovative STEAM (Science, Technology, Engineering, Art, Maths) education offer, children and our community regularly engage with London's rich cultural and business partnerships.

Impact

We measure the impact of the curriculum against various outcomes through:

- Standardised summative assessment points at EYFS, KS1 and KS2.
- Pupil voice is monitored regularly through questionnaires and interviews with a range of children from EYFS to upper KS2.
- Learning walks and book monitoring by maths leader and senior leadership team takes place regularly and key findings are reported to governors.
- Staff questionnaires and feedback during regular staff CPD.
- Assessment data is reviewed by class teachers and SLT in termly pupil progress meetings.
- Teaching staff attend moderation training between the federation and with other Camden schools.
- Subject leaders meet with the Maths governor between the federation.
- The school strives to achieve excellent end of Key Stage results that are above local and national averages for all learners.



	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Pacers	Development Matters 2021 Supportive:	Reception Mastering Number Supportive:	Year 1 Maths Pacer	Year 2 Maths Pacer	Year 3 Maths Pacer	Year 4 Maths Pacer	Year 5 Maths Pacer	Year 6 Maths Pacer

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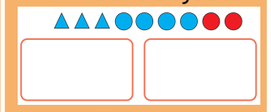
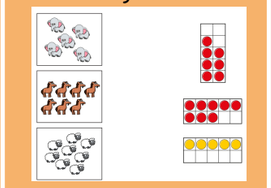
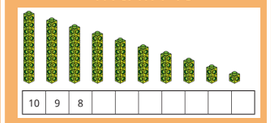
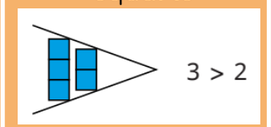
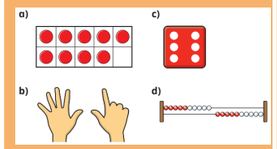
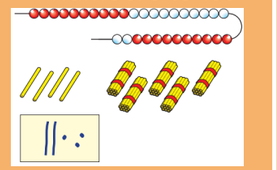
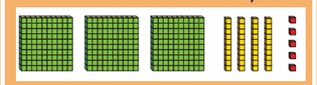
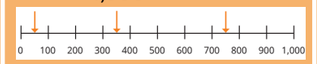
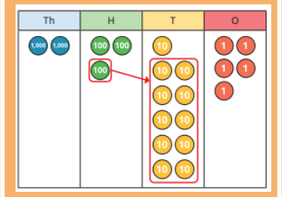
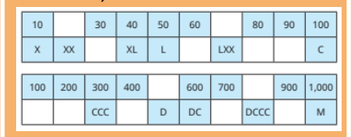
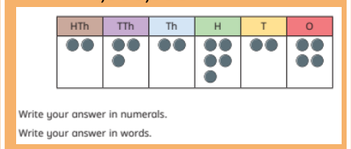
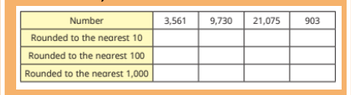
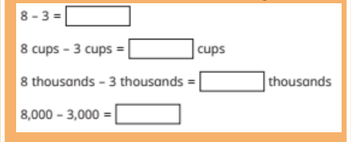
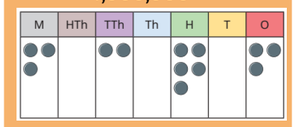
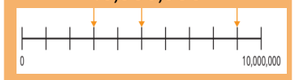
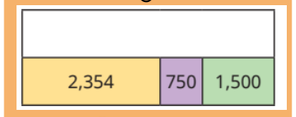
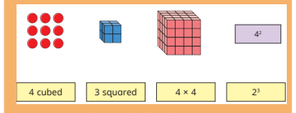
	NCETM Early Years Typical Progression Chart NCETM Early Years	White Rose EYFS NCETM Early Years Typical Progression Chart NCETM Early Years						
AUT 1	**Nursery statements will continually monitored throughout the year, rather than a half termly basis** **EYFS Statutory Educational Programme: Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers.** • **Combine objects like stacking blocks and cups. Put objects inside others and take them out again.** • **Take part in finger rhymes with numbers.** • **React to changes of amount in a group of up to three items.** • **Compare amounts, saying 'lots', 'more' or 'same'.**	Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison. Pupils will: • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame  • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers	Place Value (within 10) • Sort objects  • Count objects • Count objects from a larger group • Represent objects  • Recognise numbers as words • Count on from any number • 1 more • Count backwards within 10  • 1 less • Compare groups by matching • Fewer, more, same • Less than, greater than, equal to  • Compare numbers • Order objects and	Place Value • Numbers to 20  • Count objects to 100 by making 10s • Recognise tens and ones • Use a place value chart to partition numbers to 100  • Write numbers to 100 in words • Flexibly partition numbers to 100 • Write numbers to 100 in expanded form • 10s on the number line to 100 • 10s and 1s on the number line to 100 • Estimate numbers on a number line  • Compare objects	Place Value • Represent numbers to 100  • Partition numbers to 100 • Number line to 100 • Hundreds • Represent numbers to 1,000 • Partition numbers to 1,000  • Flexible partitioning of numbers to 1000 • Hundreds, tens and ones • Find 1, 10 or 100 more or less • Number line to 1,000 • Estimating on a number line to 1,000  • Compare numbers to 1,000 • Order numbers to 1,000 • Count in 50s Addition and Subtraction • Apply number bonds within 10	Place Value • Represent numbers to 1,000  • Partition numbers to 1,000 • Number line to 1,000 • Thousands • Represent numbers to 10,000 • Partition numbers to 10,000 • Flexible partitioning of numbers to 10,000  • Find 1, 10, 100, 1,000 more or less • Number line to 10,000 • Estimate on a number line to 10,000 • Compare numbers to 10,000  • Order numbers to 10,000 • Roman numerals • Round to the nearest 10 • Round to the nearest 100 • Round to the	Place Value • Roman numerals to 1,000  • Numbers to 10,000 • Numbers to 100,000 • Numbers to 1,000,000 • Read and write numbers to 1,000,000  • Powers of 10 10/100/1,000/10,000/100,000 more or less • Partition numbers to 1,000,000 • Number line to 1,000,000 • Compare and order numbers to 100,000 • Compare and order numbers to 1,000,000 • Round to the nearest 10, 100 or 1,000  • Round within 100,000 • Round within 1,000,000 Addition and Subtraction • Mental strategies  	Place Value • Numbers to 1,000,000  • Numbers to 10,000,000 • Read and write numbers to 10,000,000 • Powers of 10 • Number line to 10,000,000  • Compare and order any integers • Round any integers • Negative numbers Addition, subtraction, multiplication and division • Add and subtract integers  • Common factors • Common multiples • Rules of divisibility • Primes to 100 Square and cube numbers  • Multiply up to a 4-digit

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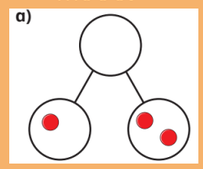
- Develop counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence.
- Count in everyday contexts, sometimes skipping numbers – '1-2-3-5'
- Climb and squeeze themselves into different types of spaces.
- Build with a range of resources.
- Complete inset puzzles.
- Compare sizes, weights etc. using gesture and language - 'bigger/little/smaller', 'high/low', 'tall', 'heavy'.
- Notice patterns and arrange things in patterns.

'hiding' inside larger numbers

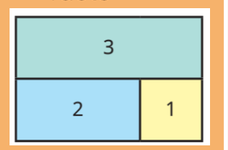
numbers

<u>Addition and Subtraction</u>

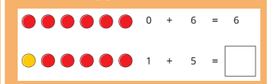
- Introduce parts and wholes
- Part-whole model



- Write number sentences
- Fact families - addition facts

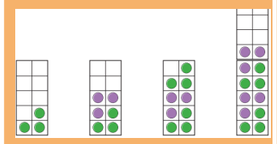


- Number bonds within 10
- Systematic number bonds within 10



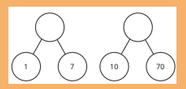
Compare numbers

- Order objects and numbers
- Count in 2s, 5s and 10s
- Count in 3s

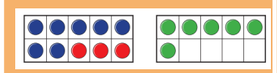


<u>Addition and Subtraction</u>

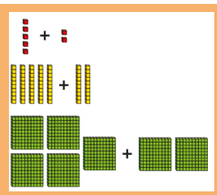
- Fact families – addition and subtraction bonds within 20
- Related facts



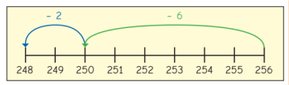
- Bonds to 100 (tens)
- Add and subtract 1s Add by making 10
- Add three 1-digit numbers



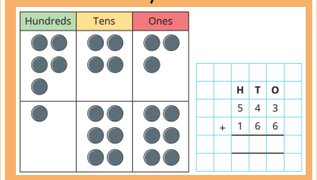
- Add to the next 10
- Add across a 10



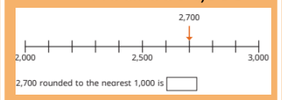
- Add and subtract 1s
- Add and subtract 10s
- Add and subtract 100s
- Spot the pattern Add 1s across a 10
- Add 10s across a 100
- Subtract 1s across a 10



- Subtract 10s across a 100
- Make connections
- Add two numbers (no exchange)
- Subtract two numbers (no exchange)
- Add two numbers (across a 10)
- Add two numbers (across a 100)



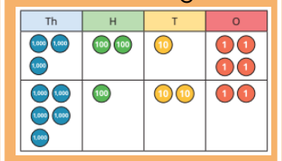
nearest 1,000



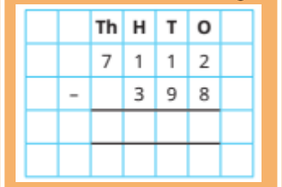
- Round to the nearest 10, 100 or 1,000

<u>Addition and Subtraction</u>

- Add and subtract 1s, 10s, 100s and 1,000s
- Add up to two 4-digit numbers - no exchange

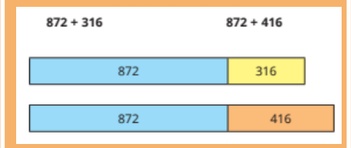


- Add two 4-digit numbers - one exchange
- Add two 4-digit numbers– more than one exchange
- Subtract two 4-digit numbers - no exchange
- Subtract two 4-digit numbers - one exchange
- Subtract two 4-digit numbers – more than one exchange



- Efficient subtraction
- Estimate answers Checking strategies

- Add whole numbers with more than four digits
- Subtract whole numbers with more than four digits
- Round to check answers Inverse operations (addition and subtraction)
- Multi-step addition and subtraction problems
- Compare calculations

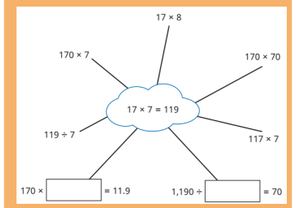


- Find missing numbers

number by a 2-digit number

- Solve problems with multiplication
- Short division
- Division using factors

- Introduction to long division
- Long division with remainders
- Solve problems with division
- Solve multi-step problems
- Order of operations
- Mental calculations and estimation
- Reason from known facts



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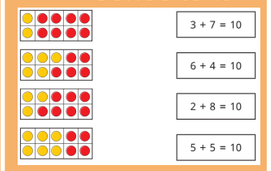
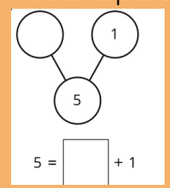
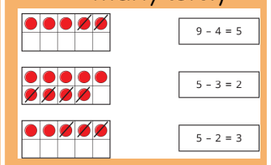
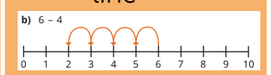
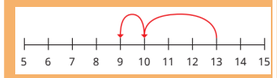
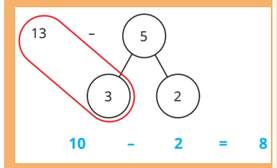
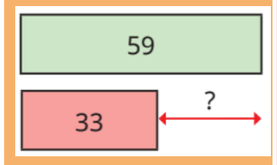
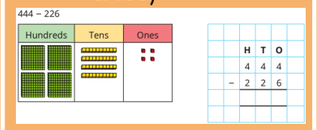
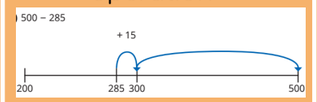
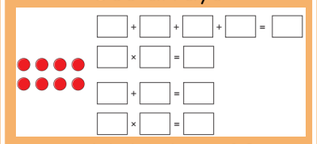
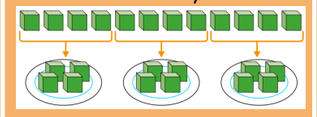
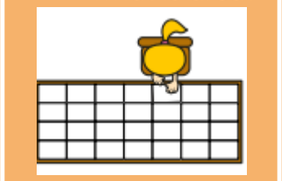
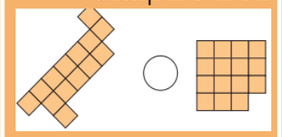
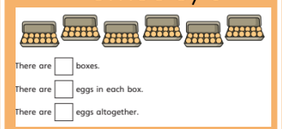
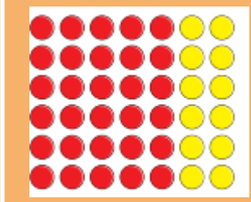
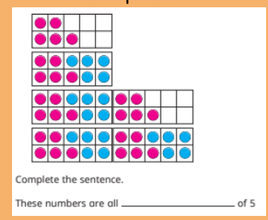
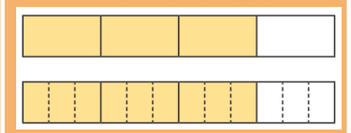
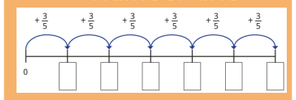
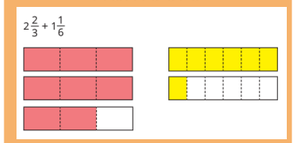
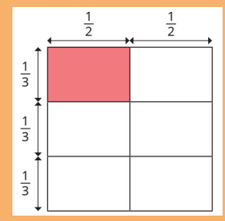
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
AUT 2	<u>Nursery statements will be continually monitored throughout the year, rather than a half termly basis -</u> See above learning goals	<u>Pupils will:</u> • connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number • develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted,	<u>Addition and Subtraction</u> • Number bonds to 10  • Addition - add together • Addition - add more • Addition problems • Find a part  • Subtraction - find a part • Fact families - the eight facts • Subtraction - take away/crossing out (How many left?)  • Subtraction - take away (How many left?) • Subtraction on a number line  • Add or subtract 1 or 2	<u>Addition and Subtraction</u> • Subtract across 10  • Subtract from a 10 • Subtract a 1-digit number from a 2-digit number (across a 10)  • 10 more, 10 less • Add and subtract 10s Add two 2-digit numbers (not across a 10) • Add two 2-digit numbers (across a 10) • Subtract two 2-digit numbers (not across a 10) • Subtract two 2-digit numbers (across a 10)  • Mixed addition and	<u>Addition and Subtraction</u> • Subtract two numbers (across a 10) • Subtract two numbers (across a 100)  • Add 2-digit and 3-digit numbers • Subtract a 2-digit number from a 3-digit number • Complements to 100 • Estimate answers • Inverse operation  <u>Multiplication and Division A</u> • Multiplication - equal groups • Use arrays  • Multiples of 2 • Multiples of 5 and 10 • Sharing and grouping • Multiply by 3 • Divide by 3  • The 3 times-table	<u>Measurement - Area</u> • What is area?  • Counting squares • Make shapes • Compare area  <u>Multiplication and Division A</u> • Multiples of 3 • Multiply and divide by 6  • 6 times-table and division facts • Multiply and divide by 9 • 9 times-table and division facts • The 3, 6 and 9 times-tables • Multiply and divide by 7 • 7 times-table and division facts  • 11 times-table and division	<u>Multiplication and Division A</u> • Multiples  • Common multiples • Factors Common factors • Prime numbers • Square numbers  • Cube numbers • Multiply by 10, 100 and 1,000 • Divide by 10, 100 and 1,000  • Multiples of 10, 100 and 1,000 <u>Fractions A</u> • Find fractions equivalent to a unit fraction • Find fractions equivalent to a non-unit fraction  • Recognise equivalent fractions • Convert improper fractions to mixed numbers • Convert mixed numbers to improper fractions • Compare fractions	<u>Fractions A</u> • Equivalent fractions and simplifying • Equivalent fractions on a number line  • Compare and order (denominator) • Compare and order (numerator) • Add and subtract simple fractions • Add and subtract any two fractions • Add mixed numbers  • Subtract mixed numbers • Multi-step problems <u>Fractions B</u> • Multiply fractions by integers • Multiply fractions by fractions  • Divide a fraction by an

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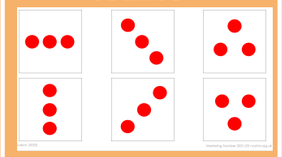
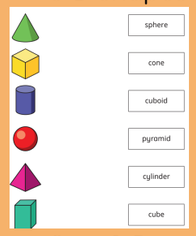
including actions and sounds



- compare sets of objects by matching
- begin to develop the language of 'whole' when talking

<u>Shape</u>

- Recognise and name 3-D shapes



- Sort 3-D shapes
- Recognise and name 2-D shapes
- Sort 2-D shapes

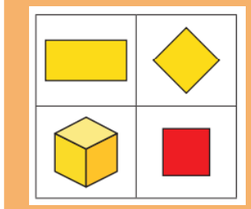
- Patterns with 2-D and 3-D shapes

subtraction

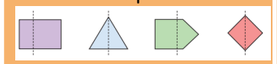
- Compare number sentences
- Missing number problems

<u>Shape</u>

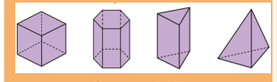
- Recognise 2-D and 3-D shapes



- Count sides on 2-D shapes
- Count vertices on 2-D shapes
- Draw 2-D shapes
- Lines of symmetry on shapes

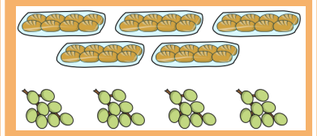


- Use lines of symmetry to complete shapes
- Sort 2-D shapes
- Count faces on 3-D shapes
- Count edges on 3-D shapes
- Count vertices on 3-D shapes



- Sort 3-D shapes
- Make patterns with 2-D and 3-D

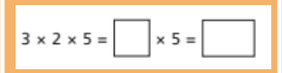
- Multiply by 4
- Divide by 4
- The 4 times-table
- Multiply by 8
- Divide by 8
- The 8 times-table



- The 2, 4 and 8 times-tables

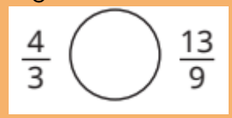
facts

- 12 times-table and division facts
- Multiply by 1 and 0
- Divide by 1 and itself
- Multiply three numbers

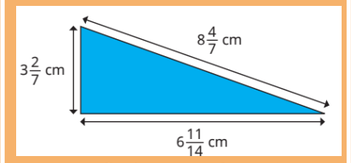


less than 1

- Order fractions less than 1
- Compare and order fractions greater than 1



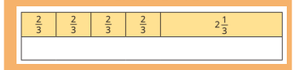
- Add and subtract fractions with the same denominator
- Add fractions within 1
- Add fractions with total greater than 1
- Add to a mixed number
- Add two mixed numbers



- Subtract fractions
- Subtract from a mixed number
- Subtract from a mixed number - breaking the whole
- Subtract two mixed numbers

integer

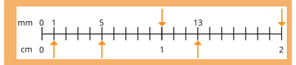
- Divide any fraction by an integer
- Mixed questions with fractions



- Fraction of an amount
- Fraction of an amount - find the whole

<u>Measuring - Converting Units</u>

- Metric measures
- Convert metric measures



- Calculate with metric measures
- Miles and kilometres
- Imperial measures

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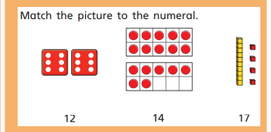
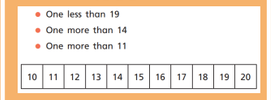
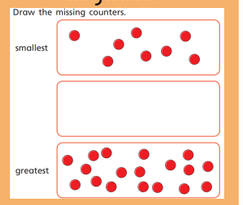
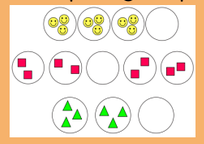
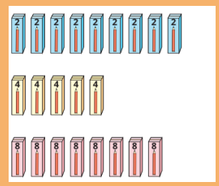
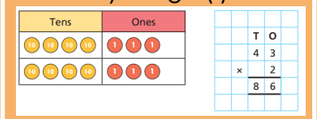
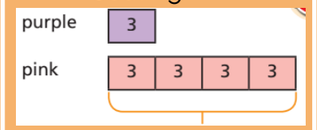
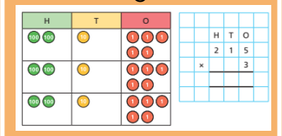
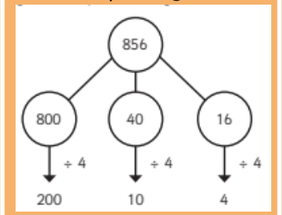
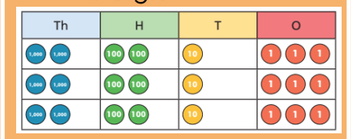
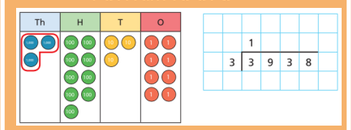
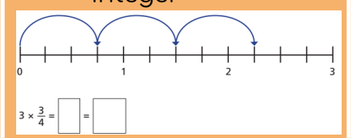
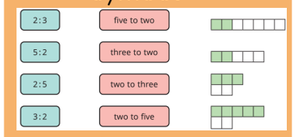
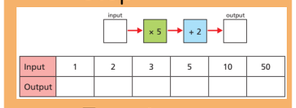
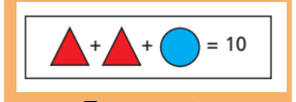
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				shapes				
SPR 1	<u>Nursery statements will continually monitored throughout the year, rather than a half termly basis -</u> See above learning goals	Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals. Pupils will: • continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals  • begin to identify missing parts for numbers within 5  • explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this	<u>Place Value (within 20)</u> • Count forward and backwards and write numbers to 20 in numerals and words  • Numbers to 11 - 20 • Tens and Ones • Count one more one less  • Compare groups of objects • Compare objects • Order groups of objects  • Order numbers <u>Addition and subtraction (within 20)</u> • Add by counting on  • Find and make numbers	<u>Money</u> • Recognising coins and notes  • Count money - pence • Count money - pounds (notes and coins) • Count money - notes and coins • Select money • Make the same amount • Compare money  • Find the total • Find the difference • Find change  • Two-step problems <u>Multiplication and Division</u> • Recognise equal groups  • Make equal groups • Add equal groups • Multiplication sentences using the x symbol • Multiplication sentences from pictures	<u>Multiplication and Division B</u> • Consolidate 2, 4 and 8 times-tables  • Comparing statements • Related calculations • Multiply 2-digits by 1 digit (1)  • Multiply 2-digits by 1 digit (2) • Divide 2 digits by 1-digit (1) • Divide 2 digits by 1-digit (2) • Divide 2 digits by 1-digit (3)) • Scaling  • Introduce relationships between 3x table, 6x table and 9x table. (2.8) • Divisibility rules for working out if a number is in the 3, 6 or 9 times table. <u>Length and perimeter</u> • Measure length	<u>Multiplication and Division B</u> • 11 and 12 times-table  • Multiply 3 numbers • Factor pairs • Efficient multiplication • Written methods • Multiply 2-digits by 1-digit (1) • Multiply 2-digits by 1-digit  • Divide 2-digits by 1-digit (1) • Divide 2-digits by 1-digit (1) • Divide 2-digits by 1-digit (2) • Divide 2-digits by 1-digit (2) • Divide 3-digits by 1-digit  • Correspondence problems <u>Length and Perimeter</u> • Equivalent lengths - m and cm	.<u>Multiplication and Division B</u> • Multiply 2-digits by 1-digit • Multiply 3-digits by 1-digit • Multiply 4-digits by 1-digit  • Multiply 2-digits (area model) • Multiply 2-digits by 2-digits • Multiply 3-digits by 2-digits • Multiply 4-digits by 2-digits • Divide 2-digits by 1-digit (1) • Divide 2-digits by 1-digit (2) • Divide 3-digits by 1-digit • Divide 4-digits by 1-digit • Divide with remainders  <u>Fractions B</u> • Multiply unit fractions by an integer  • Multiply non-unit fractions by an integer • Multiply mixed numbers by integers	<u>Ratio</u> • Using ratio language • Ratio and fractions • Introducing the ratio symbol  • Calculating ratio • Using scale factors • Calculating scale factors • Ratio and proportion problems  <u>Algebra</u> • Find a rule – one step • Find a rule – two step  • Forming expressions • Substitution • Formulae  • Forming equations • Solve simple one-step equations • Solve two-step equations • Find pairs of values  • Enumerate

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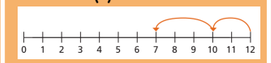
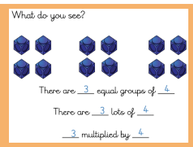
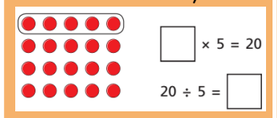
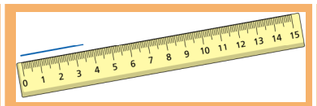
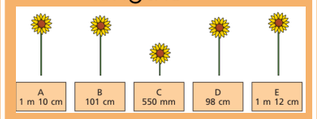
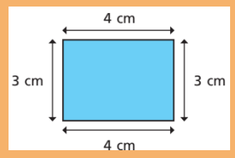
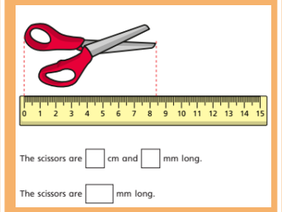
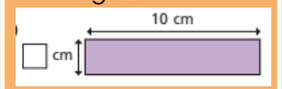
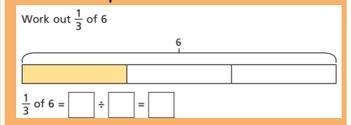
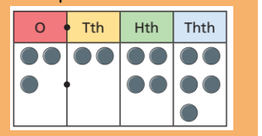
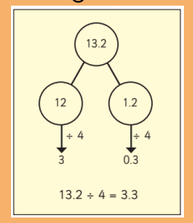
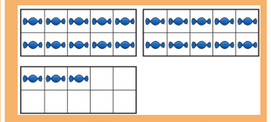
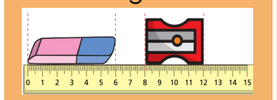
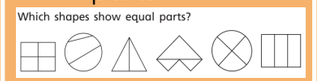
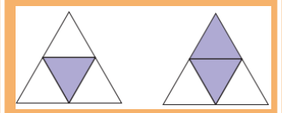
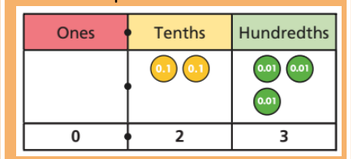
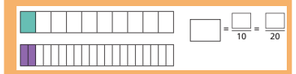
		to finger patterns and the Hungarian number frame • focus on equal and unequal groups when comparing numbers	• Add by making 10 • Subtraction -not crossing 10 • Subtraction - Crossing 10 (1)  • Subtraction - Crossing 10 (2) • Related facts • Compare number sentences  	 • Use arrays • Make doubles • 2 times-table • 5 times-table • 10 times-table  • Make equal groups - sharing • Make equal groups -grouping • Divide by 2 • Odd and even numbers • Divide by 5  • Divide by 10	 • Measure length (m) • Equivalent lengths - m & cm • Equivalent lengths -mm & cm • Compare lengths  • Add lengths • Subtract lengths • Measure perimeter • Calculate perimeter  	• Equivalent lengths - cm and mm  • Kilometres • Add lengths • Subtract lengths • Measure perimeter • Perimeter of a grid  • Perimeter of a rectangle • Perimeter of recianilier shapes	• Calculate fractions of a quantity • Fraction of an amount • Using fractions as operators  	possibilities <u>Decimals</u> • Decimals up to 2 decimal places • Understand thousandths • Three decimal places  • Multiply by 10, 100 and 1,000 • Divide by 10, 100 and 1,000 • Multiply decimals by integers • Divide decimals by integers  • Division to solve problems
	Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
SPR 2	<u>Nursery statements will continually monitored throughout the year, rather than a half termly basis -</u> See above learning goals	Pupils will: • understand that two equal groups can be called a 'double' and connect this to finger patterns • sort odd and even numbers according to their 'shape' • continue to develop their understandin g of the counting	<u>Place Value (within 50)</u> • Numbers to 50  • Tens and Ones • Represent numbers to 50 • One more one less	<u>Length and height</u> • Compare lengths and heights  • Measure lengths (1) • Measure lengths (2) • Measure length (cm) 	<u>Fractions A</u> • Make equal parts  • Recognise a half • Find a half • Recognise a quarter • Find a quarter • Recognise a third • Find a third • Unit fractions • Non-unit fractions	<u>Fractions</u> • Unit and non-unit fractions  • What is a fraction? • Tenths • Count in tenths • Equivalent fractions (1)	<u>Decimals and percentages</u> • Decimals up to 2 d.p.  • Decimals as fractions (1) • Decimals as fractions (2) • Understand thousandths	<u>Fractions as decimals</u> • Decimals as fractions  • Fractions to decimals (1) • Fractions to decimals (2) <u>Percentages</u> • Understand percentages • Fractions to

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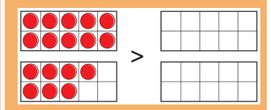
sequence and link cardinality and ordinality through the 'staircase' pattern

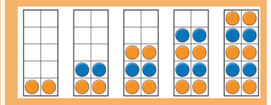
- order numbers and play track games
- join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers

.

- Compare objects within 50



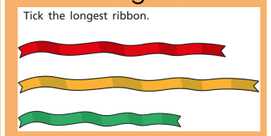
- Compare numbers within 50
- Order numbers within 50
- Count in 2s



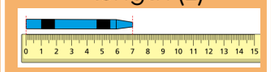
- Count in 5s

<u>Length and Height</u>

- Compare lengths and heights



- Measure length (1)
- Measure length (2)



<u>Mass and Volume</u>

- Introduce weight and mass
- Measure mass

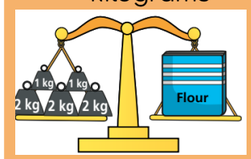
- Compare Mass
- Introduce capacity and volume
- Measure capacity
- Compare capacity

- Measure length (m)
- Compare lengths
- Order lengths
- Four operations with lengths

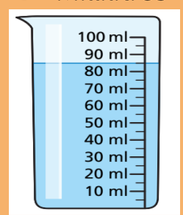
<u>Mass, Capacity and Temperature</u>

- Introduce weight and mass

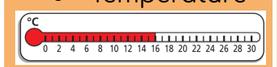
- Measure mass
- Compare mass
- Measure mass in grams
- Measure mass in kilograms

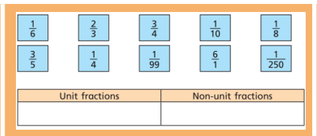


- Introduce capacity and volume
- Measure capacity
- Compare volume
- Millilitres



- Litres
- Temperature

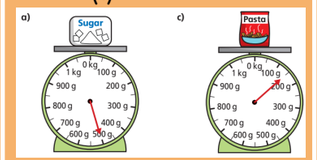




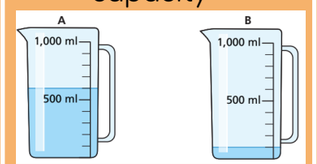
- Equivalence of 1/2 and 2/4
- Count in fractions

<u>Mass and capacity</u>

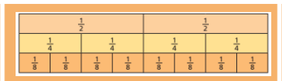
- Compare mass
- Measure mass (1)



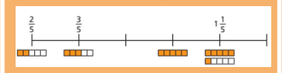
- Measure mass (2)
- Compare mass
- Add and subtract mass
- Compare volume
- Measure capacity (1)
- Measure capacity (2)
- Compare capacity
- Add and subtract capacity



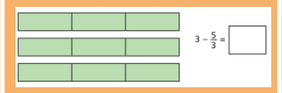
- Temperature



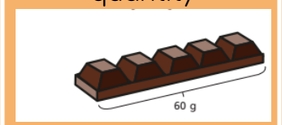
- Equivalent fractions (2)
- Equivalent fractions (1)
- Equivalent fractions (2)
- Fractions greater than 1
- Count in fractions



- Add fractions
- Add 2 or more fractions
- Subtract fractions
- Subtract 2 fractions
- Subtract from whole amounts



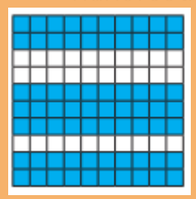
- Fractions of a set of objects (1)
- Fractions of a set of objects (2)
- Calculate fractions of a quantity



- Problem solving – calculate quantities

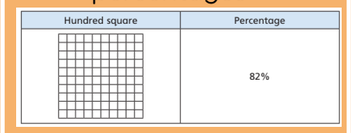
<u>Decimals A</u>

- Recognise tenths and hundredths



- Tenths as

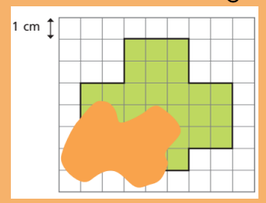
- Thousandths as decimals
- Rounding decimals
- Order and compare decimals
- Understand percentages



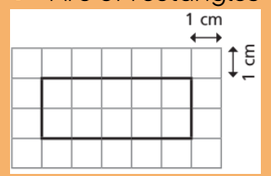
- Percentages as fractions and decimals
- Equivalent F.D.P.

<u>Perimeter and Area</u>

- Measure perimeter
- Perimeter on a grid



- Perimeter of rectangles
- Perimeter of rectilinear shapes
- Calculate Perimeter
- Counting squares
- Are of rectangles

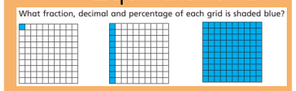


- Area of compound shapes
- Area of irregular shapes

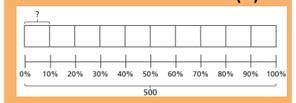
<u>Statistics</u>

- Interpret charts
- Comparison, sum and difference
- Introduce line graphs
- Read and interpret line graphs

- percentages
- Equivalent FDP



- Order FDP
- Percentage of an amount (1)
- Percentage of an amount (2)

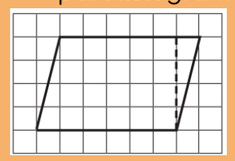


- Percentages – missing values

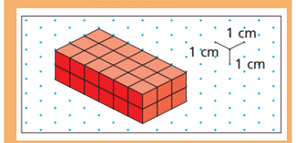
<u>Area, perimeter and volume</u>

- Shapes – same area
- Area and perimeter

- Area of a triangle (1)
- Area of a triangle (2)
- Area of a triangle (3)
- Area of parallelogram



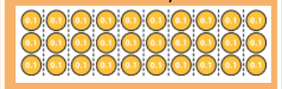
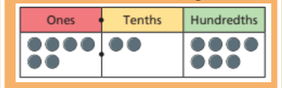
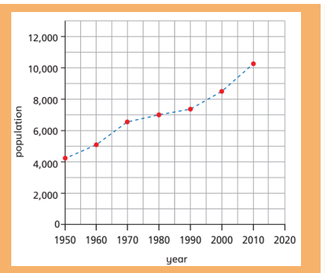
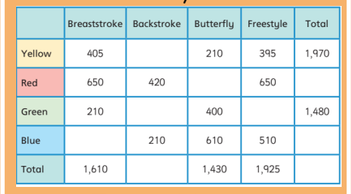
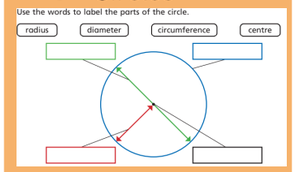
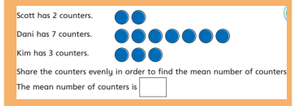
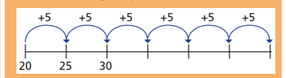
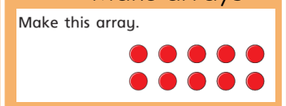
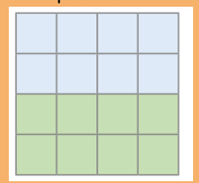
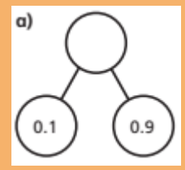
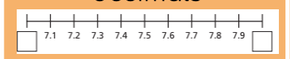
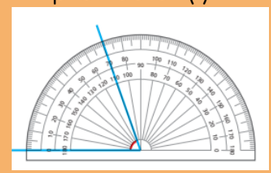
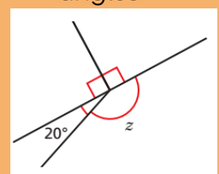
- What is volume?
- Volume – counting cubes
- Volume of a cuboid



<u>Statistics</u>

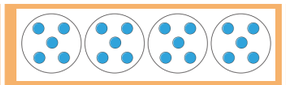
- Read and interpret line graphs

Brecknock Maths Progression Document 2022-2023

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			Which group of containers holds more water? 			decimals • Tenths on a place value grid • Tenths on a number line • Divide 1-digit by 10  • Divide 2-digits by 10 • Hundredths • Hundredths as decimals • Hundredths on a place value grid  • Divide 1 or 2-digits by 100	 • Draw line graphs • Use line graphs to solve problems • Read and interpret tables • Two-way tables  • Timetables	• Draw line graphs • Use line graphs to solve problems • Circles  • Read and interpret pie charts • Pie charts with percentages • Draw pie charts • Finding the mean 
SUM 1	<u>Nursery statements will continually monitored throughout the year, rather than a half termly basis -</u> See above learning goals	Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice. Pupils will: • continue to develop their counting skills, counting larger sets as well as counting actions and sounds	<u>Multiplication and Division</u> • Count in 2s • Count in 5s  • Count in 10s • Make equal groups • Add equal groups • Make arrays  • Make doubles • Make equal groups – grouping • Make equal groups - sharing	<u>Fractions</u> • Make equal parts  • Recognise a half • Find a half • Recognise a quarter • Find a quarter • Recognise a third	<u>Fractions B</u> • Making the whole  • Tenths • Count in tenths • Tenths as decimals • Fractions on a number line • Fractions of a set of objects (1)  • Fractions of a set of objects (2) • Fractions of a set of objects (3) • Equivalent fractions (1) • Equivalent fractions (2)	<u>Decimals B</u> • Bonds to 10 and 100 • Make a whole  • Write decimals • Compare decimals • Order decimals • Round decimals  • Halves and quarters <u>Money</u>	<u>Shape</u> • Identify angles • Compare and order angles • Measure angles in degrees • Measuring with a protractor (1)  • Measuring with a protractor (2) • Drawing lines and angles accurately • Calculating angles on a straight line	<u>Shape</u> • Measure with a protractor • Draw lines and angles accurately • Introduce angles • Angles on a straight line • Angles around a point • Calculate angles  • Vertically opposite angles • Angles in a triangle

Brecknock Maths Progression Document 2022-2023

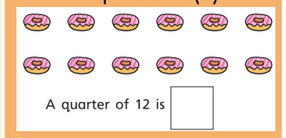
- explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame
- compare quantities and numbers, including sets of objects which have different attributes
- continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2



Fractions

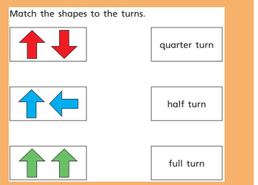
- Find a half (1)

- Find a half (2)
- Find a quarter (1)
- Find a quarter (2)

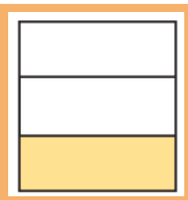


Position and direction

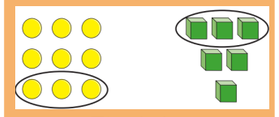
- Describe turns



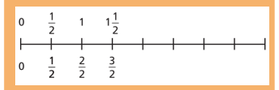
- Describe position (1)
- Describe position (2)



- Find a third
- Unit fractions
- Non-unit fractions
- Equivalence of ½ and 2/4



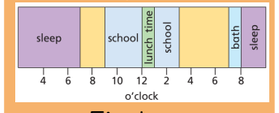
- Find three quarters
- Count in fractions



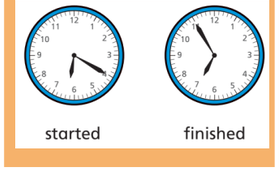
Time

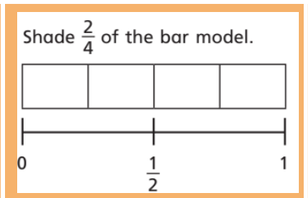
- Telling time to the hour
- Telling time to the half hour
- O'clock and half past

- Quarter past and quarter to
- Telling time to 5 minutes
- Writing time
- Hours and days



- Find durations of time
- Compare durations of time



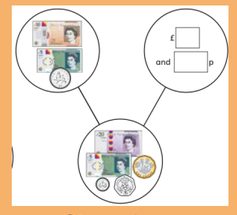


- Equivalent fractions (3)
- Compare fractions
- Order fractions
- Add fractions
- Subtract fractions

Money

- Count money (pence)
- Count money (pounds)
- Pounds and pence

- Convert pounds and pence
- Add money
- Subtract money



- Give change

Time

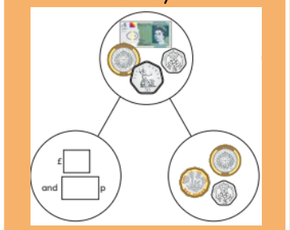
- O'clock and half past
- Quarter past and quarter to
- Months and years

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

- Hours in a day
- Telling the time to 5 minutes
- Telling the time to the minute

- Pounds and pence

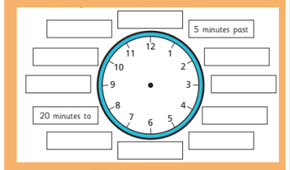
- Ordering money
- Estimating money
- Convert pounds and pence
- Add money
- Subtract money



- Find change
- Four operations

Time

- Telling the time to 5 minutes

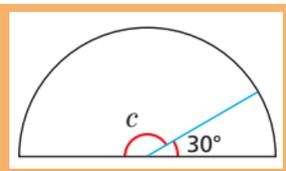


- Telling the time to the minute
- Using a.m. and p.m. 24-hour clock
- Hours, minutes and seconds
- Years, months, weeks and days

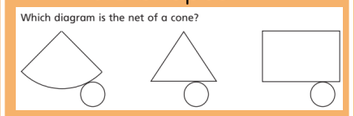
January	April	July	October
February	May	August	November
March	June	September	December

Less than 30 days	30 days	31 days

- Analogue to digital – 12 hour

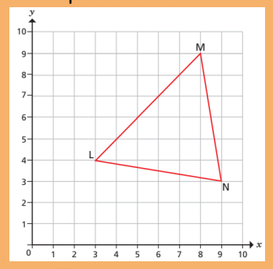


- Calculating angles around a point
- Triangles
- Quadrilaterals
- Calculating lengths and angles in shapes
- Regular and irregular polygons
- Reasoning about 3-D shapes

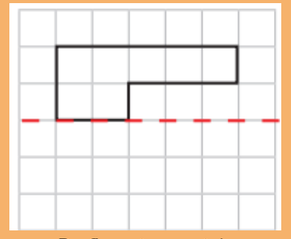


Position and direction

- Describe position
- Draw on a grid
- Position in the first quadrant

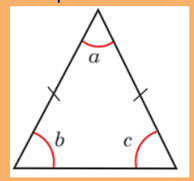


- Translation Translation with coordinates
- Lines of symmetry
- Complete a symmetric figure
- Reflection

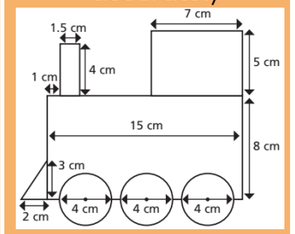


- Reflection with coordinates

- Angles in a triangle - special cases



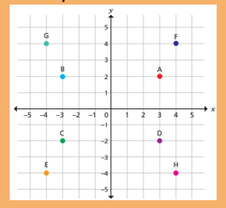
- Angles in a triangle - missing angles
- Angles in special quadrilaterals
- Angles in regular polygons
- Draw shapes accurately



- Draw nets of 3-D shapes

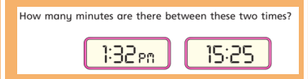
Position and direction

- The first quadrant
- Four quadrants



- Translations
- Reflections

Brecknock Maths Progression Document 2022-2023

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					• Using a.m. and p.m. • 24-hour clock  • Finding the duration • Comparing durations • Start and end times  • Measuring time in seconds	• Analogue to digital – 24 hour  		

Brecknock Maths Progression Document 2022-2023

SUM 2

Nursery statements will continually monitored throughout the year, rather than a half termly basis -
See above learning goals

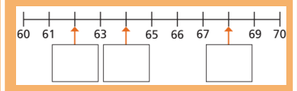
Pupils will:

- begin to generalise about 'one more than' and 'one less than' numbers within 10

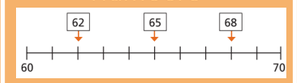
- continue to identify when sets can be subitised and when counting is necessary
- develop conceptual subitising skills including when using a rekenrek

Place Value (within 100)

- Counting forwards and backwards within 100



- Partitioning numbers
- Comparing numbers (1)
- Comparing numbers (2)
- Ordering numbers



- One more, one less

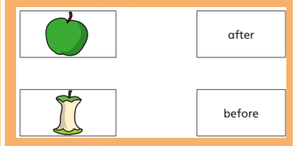
Money

- Recognising coins

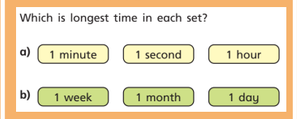
- Recognising notes
- Counting in coins

Time

- Before and after



- Dates
- Time to the hour
- Time to the half hour
- Writing time
- Comparing time

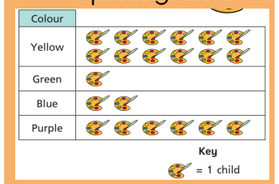


Statistics

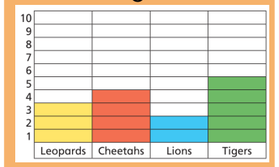
- Make tally charts

Item	Tally
pencils	IIII
rubbers	卌 IIII
rulers	卌 I

- Draw pictograms
- Interpret pictograms

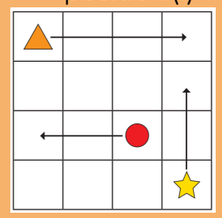


- Draw pictograms (2, 5 and 10)
- Interpret pictograms (2, 5 and 10)
- Block diagrams



Position and direction

- Describe position (1)

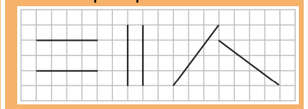


- Describe position (2)
- Describe movement
- Describe turns
- Describe movement and turns

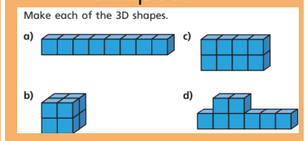
Shape

- Turns and angles
- Right angles in shapes

- Compare angles
- Draw accurately
- Horizontal and vertical
- Parallel and perpendicular



- Recognise and describe 2-D shapes
- Recognise and describe 3-D shapes
- Make 3-D shapes



Statistics

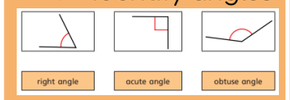
- Make tally charts
- Draw pictograms (2, 5 and 10)
- Interpret pictograms (2, 5 and 10)

- Pictograms
- Bar charts
- Tables

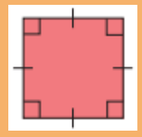
Day	Girls	Boys
Monday	15	11
Tuesday	14	12
Wednesday	14	10
Thursday	15	12
Friday	15	11

Shape

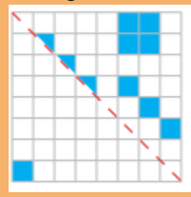
- Turns and angles
- Right angles in shapes
- Compare angles
- Identify angles



- Compare and order angles
- Recognise and describe 2-D shapes
- Triangles
- Quadrilaterals



- Horizontal and vertical
- Lines of symmetry
- Complete a symmetric figure



Statistics

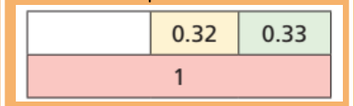
- Interpret charts

- Comparison, sum and difference
- Introducing line graphs
- Line graphs

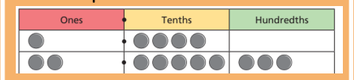
Position and Direction

Decimals

- Adding decimals within 1
- Subtracting decimals within 1
- Complements to 1



- Adding decimals – crossing the whole
- Adding decimals with the same number of decimal places
- Subtracting decimals with the same number of decimal places
- Adding decimals with a different number of decimal places



- Subtracting decimals with a different number of decimal places
- Adding and subtracting wholes and decimals
- Decimal sequences
- Multiplying decimals by 10, 100 and 1,000

- Dividing decimals by 10, 100 and 1,000

Negative Numbers

- Negative Numbers

- Negative numbers - count forwards and backwards across 0 and interpret negative numbers in a graphing context

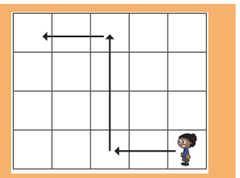
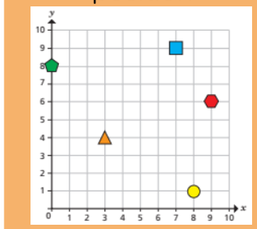
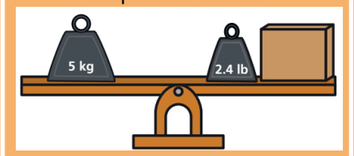
Converting Units

- Kilometres

KS2 SATs

Themed projects, consolidation and problem solving

Brecknock Maths Progression Document 2022-2023

				 • Making patterns with shapes		• Describe position  • Draw on a grid • Move on a grid • Describe movement on a grid	• Kilograms and kilometres • Millimetres and millilitres • Metric units • Imperial units  • Converting units of time • Timetables <u>Measurement - volume</u> • What is volume? • Compare volume  • Estimate volume • Estimate capacity	