

Mathematics Curriculum Overview



THURGOLAND

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LEARNING TOGETHER
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Identified areas of weakness from gap analysis: Autumn Spring Summer

EYFS

Autumn	Transition and baseline assessment 'Getting to know you'	Match, Sort and Compare Match objects Match pictures and objects Identify a set Sort objects to a type Explore sorting techniques Create sorting rules Compare amounts	Talk about measure and patterns Compare size Compare mass Compare capacity Explore simple patterns Copy and continue simple patterns Create simple patterns	It's me 1, 2, 3 Find 1, 2 and 3 Subitise 1, 2 and 3 Represent 1, 2 and 3 1 more 1 less Composition of 1, 2 and 3	Circles and triangles Identify and name circles and triangles Compare circles and triangles Shapes in the environment Describe position	1,2, 3, 4, 5 Find 4 and 5 Subitise 4 and 5 Represent 4 and 5 1 more 1 less Composition of 4 and 5 Composition of 1-5	Shapes with 4 sides Identify and name shapes with 4 sides Combine shapes with 4 sides Shapes in the environment My day and night
Spring	Alive in 5 Introduce zero Find 0 to 5 Subitise 0 to 5 Represent 0 to 5 1 more 1 less Composition Conceptual subitising to 5	Mass and Capacity Comparing mass Find a balance Explore capacity Compare capacity	Growing 6, 7 8 Find 6, 7 and 8 Represent 6, 7 and 8 1 more 1 less Composition of 6, 7 and 8 Make pairs – odd and even Double to 8 (find a double) Double to 8 (make a double) Combine 3 groups Conceptual subitising	Length, height and time Explore length Compare length Explore height Compare height Talk about time Order and sequence time	Building 9 and 10 Find 9 and 10 Compare numbers to 10 Represent 9 and 10 Conceptual subitising to 10 1 more 1 less Composition to 10 Bonds to 10 (2 parts) Make arrangements to 10 Bonds to 10 (3 parts) Doubles to 10 (find a double) Doubles to 10 (make a double) Explore even and odd	Explore 3D shapes Recognise and name 3D shapes Find 2D shapes within 3D shapes Use 2D shapes for tasks 3D shapes in the environment Identify more complex patterns Copy and continue patterns Patterns in the environment	



Summer	To 20 and beyond Build numbers beyond 10 (10-13) Continue patterns beyond 10 (10-13) Build numbers beyond 10 (14-20) Continue patterns beyond 10 (14-20) Verbal counting beyond 20 Verbal counting patterns	How many now? Add more How many did I add? Take away How many did I take away?	Manipulate, compose and decompose Select shapes for a purpose Rotate shapes Manipulate shapes Explain shape arrangements Compose shapes Decompose shapes Copy 2D shape pictures Find 2D shapes within 3D shapes	Sharing and grouping Explore sharing Sharing Explore grouping Grouping Even and odd sharing Play with and build doubles	Visualise, build and map Identify units of repeating patterns Create own pattern rules Explore own pattern rules Replicate and build scenes and constructions Visualise from different positions Describe positions Give instructions to build Explore mapping Represent maps with models Create own maps from familiar places Create own maps and plan from story situations	Make connections Deepen understanding Patterns and relationships
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Year 1



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Autumn	Place Value (10) Week 1-5		Addition and subtraction (10) Week 6-10		Shape Week 11
	Sort objects Count objects Count objects from group of 10 Represent objects Represent numbers to 10 Recognise numbers as words Count on from any number Count one more Count backwards within 10 Count one less Compare groups by matching Fewer, more, same Less than, greater than, equal to Compare numbers Order objects and numbers The number line		Introducing parts and wholes Part-whole model Write number sentences Fact families – addition facts Number bonds within 10 Systematic number bonds within 10 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/cross out Subtraction – take away Subtraction on a number line Add or subtract 1 or 2		Recognise and name 3D shapes Sort 3D shapes Recognise and name 2D shapes Sort 2D shapes Patterns with 3D and 2D shapes
Spring	Place Value (within 20) Week 1 -3	Addition and Subtraction (within 20) Week 4 – 6	Place Value (within 50) Week 7 – 8	Length and Height Week 9 - 10	Mass and Volume Week 11 - 12
	Count within 20 Understand 10 Understand 11, 12, 13 Understand 14, 15, 16 Understand 17, 18, 19 Understand 20 1 more 1 less The number line to 20 Use a number line to 20 Estimate on a number line to 20 Compare numbers to 20 Order numbers to 20	Add by counting on within 20 Add ones using number bonds Find and make number bonds to 20 Doubles Near doubles Subtract ones using number bonds Subtraction – counting back Subtraction - finding the difference Related facts	Count from 20 to 50 20, 30, 40 and 50 Count by making groups of tens Groups of tens and ones Partition into tens and ones The number line to 50 Estimate on a number line to 50 1 more 1 less	Compare lengths and heights Measure length using objects Measure length in centimetres	Heavier and lighter Measure mass Compare mass Full and empty Compare volume Measure capacity Compare capacity



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	Missing number problems					
Summer	Multiplication and Division Week 1 – 3	Fractions Week 4 – 5	Position and direction Week 6	Place Value (100) Week 7- 8	Money Week 9	Time Week 10 - 11
	Count in 2s Count in 10s Count in 5s Recognise equal groups Add equal groups Make arrays Make doubles Make equal groups – grouping Make equal groups – sharing	Recognise half of an object or shape Find a half of an object or shape Recognise half of a quantity Find a half of a quantity Recognise a quarter of an object or a shape Find a quarter of an object or a shape Recognise a quarter of a quantity Find a quarter of a quantity	Describe turns Describe position – left and right Describe position – forwards and backwards Describe position – above and below Ordinal numbers	Count from 50 – 100 Tens to 100 Partition into tens and ones The number line to 100 1 more 1 less Compare numbers with the same number of tens Compare any two numbers	Unitising Recognise coins Recognise notes Count in coins	Before and after Days of the week Months of the year Hours, minutes, seconds Tell the time to the house Tell the time to half hour



Statements in blue highlight the teacher assessment framework

Autumn	Place Value Week 1 – 4	Addition and subtraction Week 5 – 9	Shape Week 10 – 12
	<p>Numbers to 20 Count objects to 100 by making 10s Recognise tens and ones Use a place value chart 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 Compare numbers Order objects and numbers Count in 2s, 5s and 10s Count in 3s</p>	<p>Bonds to 10 Fact families – addition/subtraction within 20 Related facts Bonds to 100 (tens) Add and subtract 1s Add by making 10 Add 3 1 digit numbers Add to the next 10 Add across a 10 Subtract across 10 Subtract from a 10 Subtract a 1 digit from a digit (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 subtraction Compare number sentences Missing number problems</p> <p>TAF GDS Use reasoning about numbers and relationships to solve more complex problems and explain their thinking (e.g. $29 + 17 = 15 + 4 +$; ‘together Jack and Sam have £14. Jack has £2 more than Sam. How much money does Sam have?’ etc.) Solve unfamiliar word problems that involve more than one step (e.g. ‘which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?’)</p>	<p>Recognise 2D and 3D shapes Count sides on 2D shapes Count vertices on 2D shapes Draw 2D shapes Lines of symmetry on shapes Use lines of symmetry to complete shapes Sort 2D shapes Count faces on 3D shapes Count edges on 3D shapes Count vertices on 3D shapes Sort 3D shapes Make patterns with 2D and 3D shapes</p> <p>TAF GDS Describe similarities and differences of 2-D and 3-D shapes, using their properties (e.g. that two different 2-D shapes both have only one line of symmetry; that a cube and a cuboid have the same number of edges, faces and vertices, but different dimensions).</p>



Spring	Multiplication and Division Week 1 – 5		Money Week 6 - 7		Fractions Week 8 – 11		Time Week 12 – 13			
	Recognise equal groups Make equal groups Add equal groups Introduce multiplication symbol Multiplication sentences Use arrays Make equal groups – grouping Make equal groups – sharing The 2 times table Divide by 2 Doubling and halving Odd and even numbers 10 times table Divide by 10 5 times table Divide by 5 The 5 and 10 times table TAF GDS Recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts		Count money – pence Count money – pounds Count money – pence and pounds Choose notes and coins Make the same amount Compare amounts of money Calculate with money Make a pound Find change Two-step problems		Introduction to parts and wholes Equal and unequal parts Recognise a half Find a half Recognise a quarter Find a quarter Recognise a third Find a third Find the whole Unit fractions Non-unit fractions Recognise equivalence of a half and two quarters Recognise three quarters Find three quarters Count in fractions up to a whole		O'clock and half past Quarter past and quarter to Tell time past the hour Tell time to the house Tell time to 5 minutes Minutes in an hour Hours in a day			
Summer	Time Week 1 – 2		Statistics Week 3 – 4		Length and Height Week 5- 6		Mass, capacity and temperature Week 7 - 9		Position and Direction Week 10 - 11	
	O'clock and half past Quarter past and quarter to Tell time past the hour Tell time to the house Tell time to 5 minutes Minutes in an hour Hours in a day		Make tally charts Tables Block diagrams Draw pictograms (Scale 1) Interpret pictogram (Scale 1) Draw pictograms (2, 5, 10)		Measure in centimetres Measure in metres Compare lengths and heights Order lengths and heights Four operations with lengths and heights		Compare mass Measure in grams Measure in kilograms Four operations with mass Compare volume and capacity Measure in millilitres Measure in litres		Language of position Describe movement Describe turns Describe movement and turns Shape patterns with turns	



		Interpret pictograms (2, 5, 10) TAF GDS Read scales where not all numbers on the scale are given and estimate points in between		Four operations with volume and capacity Temperature	
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Year 3

Autumn	Place Value Week 1 - 3	Addition and subtraction Week 4 – 8	Multiplication Week 9 – 12
	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 1,000 Hundreds, tens and ones Find 1, 10, 100 more or less	Apply number bonds within 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	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 Multiply by 4



	Number line to 1,000 Estimate on a number line to 1,000 Compare numbers to 1,000 Order numbers to 1,000 Count in 50s	Make connections Add 2 numbers (no exchange) Subtract 2 numbers (no exchange) Add 2 numbers (across a 10) Add 2 numbers (across a 100) Subtract 2 numbers (across a 10) Subtract 2 numbers (across a 100) Add 2 digit and 3 digit numbers Subtract a 2 digit from a 3 digit number Complements to 100 Estimate answers Inverse operations Make decisions	Divide by 4 The 4 times table Multiply by 8 Divide by 8 The 8 times table The 2, 4 and 8 times tables		
Spring	Multiplication and division Week 1 – 3 Multiples of 10 Related calculations Reasoning about multiplication Multiply 2 digit by 1 digit - no exchange Multiply 2 digit by 1 digit – exchange Link multiplication and division Divide 2 digit by 1 digit – no exchange Divide 2 digit by 1 digit – flexible partitioning Divide a 2 digit by 1 digit – remainders Scaling How many ways	Length and Perimeter Week 4 – 6 Measure in M and CM Measure in MM Measure in CM and MM Equivalent lengths M and CM Equivalent length CM and MM Compare lengths Add lengths Subtract lengths What is perimeter Calculate perimeter	Fractions Week 7 – 9 Understand denominators Compare and order unit fractions Understand numerator – non unit fractions Understand the whole Compare and order non-unit fractions Fractions and scales Fractions on a number line Count in fractions on a number line Equivalent fractions	Mass and capacity Week 10 - 12 Use scales Measure mass in grams Measure mass in KG and G Equivalent masses (KG and G) Compare mass Add and subtract mass Measure capacity and volume in ML Measure capacity and volume in L and ML Equivalent capacities ML and L Compare capacity and volume Add and subtract capacity and volume	
Summer	Fractions Week 1 – 2 Add fractions Subtract fractions Partition the whole	Money Week 3 - 4 Pounds and pence Convert pounds and pence	Time Week 5 - 7 Roman numerals to 12 Tell the time to 5 minutes Tell the time to the minute	Shape Week 8 – 9 Turns and angles Right angles Compare angles	Statistics Week 10 – 12 Interpret pictograms Draw pictograms Interpret bar charts



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	Unit fractions of a set of objects Non-unit fractions of a set of objects Reasoning with fractions of an amount	Add money Subtract money Find change	Reading time on a digital clock Use AM and PM Years, months and days Days and hours Hours and minutes using start and end times Hours and minutes using durations Minutes and seconds Units of time Solve problems with time	Measure and draw accurately Horizontal and vertical Parallel and perpendicular Recognise and describe 2D shapes Draw polygons Recognise and describe 3D shapes Make 3D shapes	Draw bar charts Collect and represent data Two-way tables
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Autumn	<p>Place Value Week 1 – 4</p> <p>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 nearest 10 Round to nearest 100 Round to nearest 1,000 Round to nearest 10, 100 or 1,000</p>	<p>Addition and subtraction Week 5 - 7</p> <p>Add and subtract 1s, 10s, 100s and 1,000s Add up to 2 4 digit numbers – no exchange Add 2 4 digit numbers – 1 exchange Add 2 4 digit numbers – more than 1 exchange Subtract 2 4 digit numbers – no exchange Subtract 2 4 digit numbers – one exchange Subtract 2 4 digit numbers – more than 1 exchange Efficient subtraction Estimate answers Checking strategies</p>	<p>Area Week 8</p> <p>What is area? Count squares Make shapes Compare areas</p>	<p>Multiplication and Division Week 9 - 11</p> <p>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 facts 12 times table and division facts Multiply by 1 and 0 Divide a number by 1 and itself</p>
Spring	<p>Multiplication and division Week 1 – 3</p> <p>Multiply three number Factor pairs Use factor pairs Multiply by 10 Multiply by 100 Divide by 100 Divide by 10 Divide by 100 Related facts Informal written methods for multiplication and division</p>	<p>Length and Perimeter Week 4 - 5</p> <p>Measure in KM and M Equivalent lengths KM and M Perimeter on a grid Perimeter of a rectangle Perimeter of rectilinear shapes Missing lengths of rectilinear shapes Calculate the perimeter of rectilinear shapes</p>	<p>Fractions Week 6 – 9</p> <p>Understand the whole Count beyond 1 Partition a mixed number Number lines with mixed numbers Compare and order mixed numbers Understand improper fractions Convert mixed numbers to improper fractions Convert improper fractions to mixed numbers Equivalent fractions on a number line</p>	<p>Decimals Week 10 - 12</p> <p>Tenths as fractions Tenths as decimals Tenths on a place value chart Tenths on a number line Divide 1 digit by 1 Divide 2 digit by 10 Hundredths as fractions Hundredths as decimals Hundredths on a place value chart Divide 1 or 2 digit number by 100</p>



	Multiply a 2 digit by 1 digit Divide 2 digit by 1 digit Divide 3 digit by 1 digit Correspondence problems Efficient multiplication	Perimeter of regular polygons Perimeter of polygons	Equivalent fraction families Add 2 or more fractions Add fractions and mixed numbers Subtract 2 fractions Subtract from whole amounts Subtract from mixed numbers			
Summer	Decimals Week 1 - 2 Make a whole with tenths Make a whole with hundredths Partition decimals Flexibly partition decimals Compare decimals Order decimals Round to the nearest whole number Halves and quarters as decimals	Money Week 3 – 4 Write money using decimals Convert between pounds and pence Compare amounts of money Estimate with money Calculate with money Solve problems with money	Time Week 5 – 6 Years, months, weeks and days Hours, minutes and seconds Covert between analogue and digital times Covert to the 24 hour clock Convert from the 24 hour clock	Shape Week 8 – 9 Understand angles as turns Identify angles Compare and order angles Triangles Quadrilaterals Polygons Lines of symmetry Complete a symmetric figure	Statistics Week 10 Interpret charts Comparison, sum and difference Interpret line graphs Draw line graphs	Position/Direction Week 11 – 12 Describe position using coordinates Plot coordinates Draw 2D shapes on a grid Translate on a grid Describe translation on a grid



Autumn	<p>Place Value Week 1 – 3</p> <p>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, 1,000 Round within 100,000 Round within 1,000,000</p>	<p>Addition and subtraction Week 4 - 5</p> <p>Mental strategies Add whole numbers with more than 4 digits Subtract whole numbers with more than 4 digits Round to check answers Inverse operations (addition and subtraction) Multi-step addition and subtraction problems Compare calculations Find missing numbers</p>	<p>Multiplication/Division Week 6 – 8</p> <p>Multiples Common multiples Factors Common factors Prime numbers Square numbers Cube numbers Multiply by 10, 100, 1,000 Divide by 10, 100, 1,000 Multiples of 10, 100 and 1,000</p>	<p>Fractions Week 9 - 12</p> <p>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 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 a total greater than 1 Add to a mixed number Add 2 mixed numbers Subtract fractions Subtract from a mixed number Subtract from a mixed number – breaking the whole Subtract 2 mixed numbers</p>	
Spring	<p>Multiplication and division Week 1 - 3</p> <p>Multiply up to a 4 digit number by a 1 digit Multiply a 2 digit by a 2 digit Multiply a 2 digit by a 2 digit Multiply 3 digit number by 2 digit number Multiply 4 digit by 2 digit Solve problems Short division Divide 4 digit by 1 digit Divide with remainders Efficient division</p>	<p>Fractions Week 4 – 5</p> <p>Multiply a unit fraction by an integer Multiply a non-unit fraction by an integer Multiply a mixed number by an integer Calculate a fraction of a quantity Fraction of an amount Find the whole Use fractions as operators</p>	<p>Decimals and Percentages Week 6 – 8</p> <p>Decimals up to 2 decimal places Equivalent fractions and decimals (tenths) Equivalent fractions and decimals (hundredths) Equivalent fractions and decimals Thousandths as fractions Thousandths as decimals Thousandths on a place value chart</p>	<p>Perimeter and area Week 9 – 10</p> <p>Perimeter of rectangles Perimeter of rectilinear shapes Perimeter of polygons Area of rectangles Area of compound shapes Estimate area</p>	<p>Statistics Week 11 – 12</p> <p>Draw line graphs Read and interpret line graphs Read and interpret tables Two-way tables Read and interpret timetables</p>



	Solve problems		Order and compare decimals (same decimal place) Order and compare any decimals up to 3 decimal places Round to the nearest whole number Round to 1 decimal place Understand percentages Percentages as fractions Percentages as decimals Equivalent fractions, decimals and percentages			
Summer	Geometry Week 1 - 3 Understand and use degrees Classify angles Estimate angles Measure angles up to 180 Draw lines and angles accurately Calculate angles around a point Calculate angles on a straight line Lengths and angles in shapes Regular and irregular polygons 3D shapes	Position and Direction Week 4 - 5 Read and plot coordinates Problem solving with coordinates Translation Translation with coordinates Lines of symmetry Reflection in horizontal and vertical lines	Decimals Week 6 – 8 Use known facts to add and subtract decimals within 1 Complements to 1 Add and subtract decimals across 1 Add decimals with the same number of decimal places Subtract decimals with the same number of decimals Add decimals with different number of decimal places Subtract decimals with different numbers of decimal places Efficient strategies for adding and subtracting decimals Decimal sequences Multiply by 10, 100 and 1000 Divide by 10, 100 and 1000	Negative Numbers Week 9 Understand negative numbers Count through zero in 1s Count through 0 in multiples Compare and order negative numbers Find the difference	Converting Units Week 10 – 11 Kilograms and kilometres Millimetres and millilitres Convert units of length Convert between metric and imperial units Convert units of time Calculate with timetables	Volume Week 12 Cubic centimetres Compare volume Estimate volume Estimate capacity



			Multiply and divide by decimals – missing values.			
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Autumn	Place Value Week 1 – 2		Addition and subtraction, multiplication and division Week 3 - 7		Fractions Week 8 – 11		Converting Units Week 12
	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 integer Negative numbers		Add and subtract integers Common factors Common multiples Rules of divisibility Primes to 100 Square and cube numbers Multiply up to a 4 digit 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		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 Multiply fractions by integers Multiply fractions by fractions Divide a fraction by an integer Divide any fraction by an integer Mixed questions with fractions Fraction of an amount Fraction of an amount – find the whole		Metric measures Convert metric measures Calculate with metric measures Miles and kilometres Imperial measures
Spring	Ratio Week 1 - 2	Algebra Week 3 – 4	Decimals Week 5 - 6	Fractions, Decimals and Percentages Week 7 – 8	Area, perimeter and volume Week 9 - 10	Statistics Week 11 - 12	
	Add or multiply Use ratio language Introduction to the ratio symbol Ratio and fractions Scale drawing Use scale factors Similar shapes Ratio problems Proportion problems Recipes	1 step function machines 2 step function machines Form expression Substitution Formulae Form equations 1 step problems 2 step problems Find pairs of values	Place value within 1 Place value integers and decimals Round decimals Add and subtract decimals Multiply by 10, 100, 1000 Divide by 10, 100, 1000 Multiply decimals by integers	Decimal and fraction equivalents Fractions as division Understand percentages Fractions as percentages Equivalent fractions, decimals and percentages	Shapes – same area Area and perimeter Area of a triangle – counting squares Area of a right angled triangle Area of a parallelogram Volume – counting cubes Volume of a cuboid	Line graphs Dual bar charts Read and interpret pie charts Pie charts with percentages Draw pie charts The mean	



		Solve problems with 2 unknowns	Multiply and divide decimals in context	Order fractions, decimals and percentages Percentage of an amount – one step Percentage of an amount – multi step Percentages – missing values		
Summer	Geometry Week 1- 3 Measure and classify angles Calculate angles Vertically opposite angles Angles in a triangle Angles in a triangle – special cases Angles in a triangle – missing angles Angles in quadrilaterals Angles in polygons Circles Draw shapes accurately Nets of 3D shapes	Position and Direction Week 4 The first quadrant Read and plot points in four quadrants Solve problems with coordinates Translations Reflections			Consolidation and themed projects	