BILSTON CHURCH OF ENGLAND PRIMARY
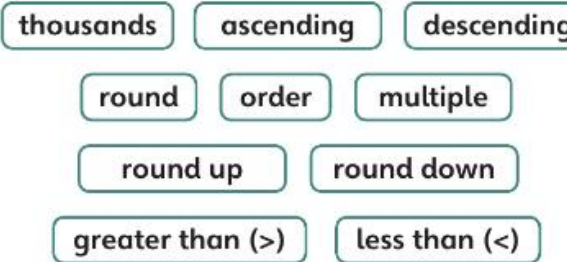
Subject	Year Group	Term
Maths	4	Autumn

Topic	National Curriculum Objectives	Power Maths Unit	NCETM Professional development documents	Ready to Progress criteria
Number and Place Value (approximate duration 8 days)	• Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). • Round any number to the nearest 10, 100 or 1,000. • Count in multiples of 6, 7, 9, 25 and 1,000. • Identify, represent and estimate numbers using different representations. • Order and compare	• Power Maths Unit 1 tens hundreds thousands partition place value number line multiples digit	Spine 1 1.22 composition and calculation: 1,000 and four digit numbers '___ hundred plus ___ hundred is equal to ___ hundred.' 'We know there are ten hundreds in one thousand, so ___ hundred plus ___ hundred is equal to ___ thousand ___ hundred.' 'We know there are ten hundreds in one thousand, so ___ thousand ___ hundred is equal to ___ hundred.' '___ hundred minus ___ hundred is equal to ___ hundred.' ‣ 'a is between ___ and ___.' ‣ 'The previous multiple of one thousand is ___. The next multiple of one thousand is ___.' ‣ 'a is nearest to ___ thousand.' ‣ 'a is ___ when rounded to the nearest thousand.'	• 4NPV–1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. • 4NPV–1 Know that 10 hundreds are equivalent to 1 thousand,

	numbers beyond 1,000. ● Identify, represent and estimate numbers using different representations. • Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.			and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. • 4NPV–2 Recognise the place value of each digit in four-digit numbers, and compose and decompose fourdigit numbers using standard and nonstandard partitioning. • 4NPV–3 Reason about the location of any four digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to

				• the nearest of each. • 4NPV–4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts
Place value (approximate duration 8 days)	• Find 1,000 more or less than a given number. • Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. • Order and compare numbers beyond 1,000. • Identify, represent and estimate numbers using different representations. • Round any number to the nearest 10, 100 or 1,000.	• Power Maths unit 2 thousands ascending descending round order multiple round up round down greater than (>) less than (<)	Spine 1 1.22 composition and calculation: 1000 and four digit numbers 'We know there are ten hundreds in one thousand, so ___ thousand ___ hundred is equal to ___ hundred.' '___ hundred minus ___ hundred is equal to ___ hundred.' ▸ 'a is between ___ and ___.' ▸ 'The previous multiple of one thousand is ___. The next multiple of one thousand is ___.' ▸ 'a is nearest to ___ thousand.' ▸ 'a is ___ when rounded to the nearest thousand.' '___ hundred plus ___ hundred is equal to ___ hundred.' 'We know there are ten hundreds in one thousand, so ___ hundred plus ___ hundred is equal to ___ thousand ___ hundred.'	• NPV–1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. • 4NPV–3 Reason about the location of any four digit number in the linear number system, including identifying the

	• Solve number and practical problems that involve all of the above and with increasingly large positive numbers. • Count in multiples of 6, 7, 9, 25 and 1,000. • Count backwards through zero to include negative numbers.			previous and next multiple of 1,000 and 100, and rounding to the nearest of each. • 4NPV–4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts
Addition and Subtraction (approximate duration 16 days)	• Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. • . Round any number to the nearest 10, 100 or 1,000. • Estimate and use inverse operations to check answers to a calculation. • Solve addition and subtraction two-step	• Power Maths Unit 3 addition total more than subtraction less than column method estimate how much strategy efficient accurate exact fact (approximate duration 16 days)	Spine 1 1.22 composition and calculation: 1000 and four digit numbers ▸ 'a is between ___ and ___.' ▸ 'The previous multiple of one thousand is ___. The next multiple of one thousand is ___.' ▸ 'a is nearest to ___ thousand.' ▸ 'a is ___ when rounded to the nearest thousand.'	• 4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)

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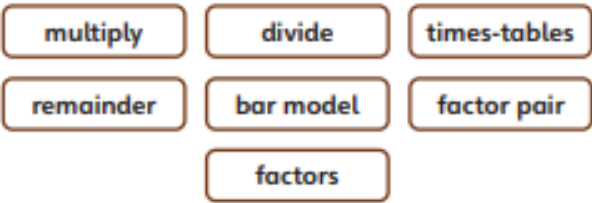|				
	problems in contexts, deciding which operations and methods to use and why.			
Measure Area (approximate duration 5 days)	• Find the area of rectilinear shapes by counting squares • Estimate, compare and calculate different measures, including money in pounds and pence. •	• Power Maths unit 4 space area rectangle square rectilinear shape unit larger greater smaller	Spine 2 2.16 Multiplicative contexts: area and perimeter 1 Use this stem sentence to introduce the term 'perimeter': '*The distance around the edge of the ___ is its perimeter.*' '*The perimeter of the ___ is ___ cm.*' '*This shape has an area of ___ square units.*' 2.17 Structures: using measures and comparison to understand scaling Summarise the relationship between the two lengths using the following stem sentence: '*The ___ is ___ times the length of the ___.*' '*___ multiplied by ___ is equal to ___.*' '*___ is ___ times the size of ___.*'	•
Multiplication and Division (approximate duration 12 days)	• Recall multiplication and division facts for multiplication tables up to 12 × 12. • Use place value, known	• Power Maths Unit 5	Spine 2 2.9 Times tables: 7 and patterns within/across times tables	• 4NF–1 Recall multiplication and division facts up to 12 x 12, and recognise products in multiplicati

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	and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. • Count in multiples of 6, 7, 9, 25 and 1,000.	multiply (×) divide (÷) multiplication fact division fact factor groups of times-table array product fact family related fact	**2.10 Connecting multiplication and division and the distributive law** *'The product of ___ and ___ is equal to the product of ___ and* *'___ times ___ is equal to ___ times ___.'* *'___ is equal to ___ plus ___, so ___ times ___ is equal to ___ times ___ plus ___ times ___.'* *'___ is equal to ___ minus ___, so ___ times ___ is equal to ___ times ___ minus ___ times ___.'* **2.11 Times tables 11 and 12**	on tables as multiples of the corresponding number • 4MD−1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.

MEDIUM TERM PLANNING

Subject	Year Group	Term
Maths	4	Spring

Topic	• National Curriculum Objectives	Power Maths Unit	• NCETM Professional development documents	• Ready to Progress criteria
Geometry Angles and 2d shapes duration approximately 5 days)	Identify acute and obtuse angles and compare and order angles up to two right angles by size. Compare and classify geometric shapes, including quadrilaterals and triangles, based on	Power Maths unit 14 quadrilateral triangle regula irregular interior angle angle acute obtuse reflect right angle symmetrical isosceles scalene equilateral line of symmetry reflective symmetr	•	4G–2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the

	their properties and sizes. Identify lines of symmetry in 2D shapes presented in different orientations. • Complete a simple symmetric figure with respect to a specific line of symmetry			perimeter of regular and irregular polygons. • 4G–3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.
Multiplication And Division (approximate duration 16 days)	• Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. • Multiply two-digit and three-digit numbers by a	• Power Maths unit 6 multiply divide times-tables remainder bar model factor pair factors	Spine 2 2.9 Times tables: 7 and patterns within/across times tables 2.10 Connecting multiplication and division and the distributive law '___ times ___ is equal to ___ times ___.' 'The product of ___ and ___ is equal to the product of ___ and __ '___ is equal to ___ plus ___, so ___ times ___ is equal to ___ times ___ plus ___ times ___.' '___ is equal to ___ minus ___, so ___ times ___ is equal to ___ times ___ minus ___ times ___.' 2.11 Times tables 11 and 12	• 4NF–2 Solve division problems, with two-digit dividends and onedigit divisors, that involve remainders, and interpret remainders appropriately according to the context. • 4NF–3 Apply place-value knowledge to known additive and multiplicative number facts

one-digit number using formal written layout. • Recognise and use factor pairs and commutativity in mental calculations. • Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.		**2.12 Division with remainders** '___ is divided into groups of ___. There are ___ groups and a remainder of ___.' use the following stem sentence to describe the solution: '___ divided into groups of ___ is equal to ___, with a remainder of ___.' sentence: 'The largest multiple of ___ that is less than or equal to ___ is ___.' **2.13 Calculation: multiplying and dividing by 10 and 100** '___ multiplied by ten is equal to ___.' '___ is ten times the size of ___.' '___ divided by ten is equal to ___.' 'Emily has ___ pencils.' '___ multiplied by ten is equal to ___.' '___ is ten times the size of ___.' '___ divided by ten is equal to ___.'	(scaling facts by 100) • 4MD–2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication. • 4MD–3 Understand and apply the distributive property of multiplication.

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'___ is a multiple of ___, so when it is divided into groups of ___ there are none left over; there is no remainder.'

'___ is not a multiple of ___, so when it is divided into groups of ___ there are some left over; there is a remainder.'

'For every one pencil of Emily's, Jamie has ten.'

'Think of ___ and make it ten times the size.'

'Think of ___ and multiply by ten.'

'___ multiplied by ten is equal to ___.'

'___ is ten times the size of ___.'

'___ pencils is ten times as many as ___ pencils. Jamie has ___ pencils.'

'___ multiplied by one hundred is equal to ___.'

'___ is one hundred times the size of ___.'

2.14 Multiplication: partitioning leading to short multiplication

Remind children of the stem sentence from step *1:4*: **'If there are ten or more tens, we must regroup the tens into hundreds and tens.'**

___ . '
equal to ___.'
'___ is one hundred times the size of ___.'
'___ people is one hundred times as many as ___ people. There are ___ people in the cinema this evening.'

2.15 Division: partitioning leading to short division

2.17 Structures: using measures and comparison to understand scaling

'___ multiplied by ___ is equal to ___.'
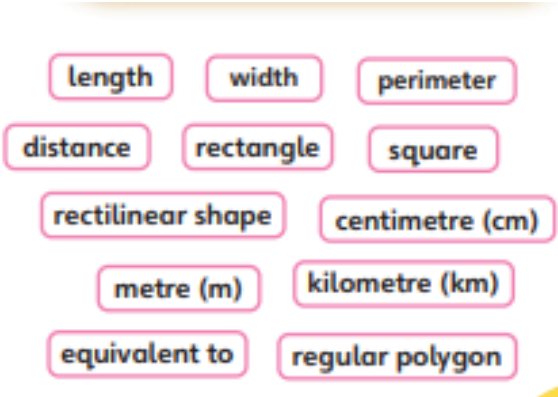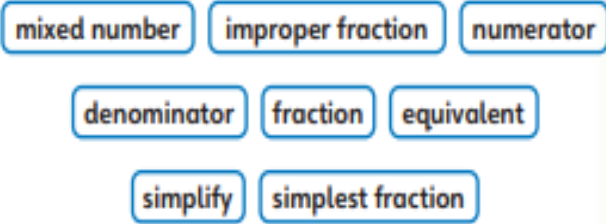**'___ is ___ times the size of ___.'**

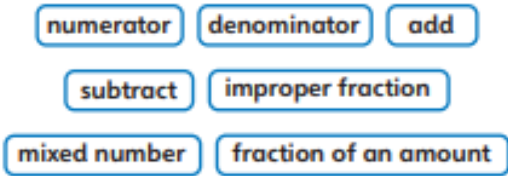Adapt the stem sentence from *Teaching points 1* and *2*: **'The ___ is ___ times the mass of the ___.'**

'___ multiplied by ___ is equal to ___.'
'___ divided by ___ is equal to ___.'
'___ is ___ times the size of ___.'

Measure Measure (perimeter) (duration approximately 6 days)	• Convert between different units of measure (for example, kilometre to metre; hour to minute). • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	Power Maths Unit 7 length width perimeter distance rectangle square rectilinear shape centimetre (cm) metre (m) kilometre (km) equivalent to regular polygon	• 4G–2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.
Fractions (duration approximately 9 days)	• Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. • Recognise and show, using diagrams, families of common equivalent fractions. • Solve problems involving increasingly harder fractions to calculate quantities, and fractions	• Power Maths unit 8 mixed number improper fraction numerator denominator fraction equivalent simplify simplest fraction	Spine 3 3.5 working across one whole: improper fractions and mixed numbers	• 4F–1 Reason about the location of mixed numbers in the linear number system. • 4F–2 Convert mixed numbers to improper fractions and vice versa.

	to divide quantities, including non-unit fractions where the answer is a whole number.		this: 'Each interval on the line is divided into ___ equal parts. This allows us to count in ___.' 'The parts are ___ and ___. The total, or whole, is ___.' For example: 'The parts are $\frac{2}{5}$ and $1\frac{1}{5}$. The total or whole is $1\frac{3}{5}$.' 'There are ___ groups of four-quarters which is ___-quarters, and ___ more quarters, so that is ___-quarters.' 'The denominator is ___. This means that each whole has been split into ___ equal parts. ___ parts make each whole.' 'The numerator is ___. The means there are ___ equal parts.' 'It is possible to make ___ full groups of ___-quarters and there are ___ more quarters.'	
Fractions (duration approximately 8 days)	• Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. • Add and subtract	• Power Maths unit 9 numerator denominator add subtract improper fraction mixed number fraction of an amount	Spine 3 3.6 multiplying whole numbers and fractions '___ lot(s) of ___ is equal to ___.' 'The whole is divided into ___ equal parts.' 'Each part is ___ of the whole.'	• 4F–3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers

	fractions with the same denominator.		*Each part is* $\frac{1}{\Box}$ *of the whole;* , $\frac{1}{\Box}$ *of ___ apples is ___ apples.* ,	
Decimals (duration approximatel y 12 days)	• Recognise and write decimal equivalents of any number of tenths or hundredths. • Solve simple measure and money problems involving fractions and decimals to two decimal places • Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and	• Power Maths unit 10 tens ones decimal point tenths hundredths greater than equivalent less than decimal centimetre millimetre	Spine 1 1.23 Composition and calculation:tenths *'___ tenths plus ___ tenths is equal to ten tenths, which is equal to one.'* *'One is equal to ten tenths; ten tenths minus ___ tenths is equal to ___ tenths.'* *'___ is between ___ and ___.'* *'___ is the previous whole number.'* *'___ is the next whole number.'* Extend the stem sentences from the previous step to include the closest whole number: *'___ is the closest whole number.'* 1.24	•

			Composition and calculation:hundredths and thousandths	
	dividing tenths by ten.			

MEDIUM TERM PLANNING

Subject	Year Group	Term
Maths	4	Summer

Topic	• National Curriculum Objectives	• Power Maths Unit	• NCETM Professional development documents	• Ready to Progress criteria
Decimals (duration approximately 12 days)	• Recognise and write decimal equivalents of any number of tenths or hundredths. • Solve simple measure and money problems involving fractions and decimals to two decimal places • Find the effect of dividing a	• Power Maths unit 10 tens ones decimal point tenths hundredths greater than equivalent less than decimal centimetre millimetre •	Spine 1 1.23 Composition and calculation:tenths	•

	one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. •			'___ tenths plus ___ tenths is equal to ten tenths, which is equal to one.' 'One is equal to ten tenths; ten tenths minus ___ tenths is equal to ___ tenths.' '___ is between ___ and ___.' '___ is the previous whole number.' '___ is the next whole number.' Extend the stem sentences from the previous step to include the closest whole number: '___ is the closest whole number.' • Composition and calculation:hundredths and thousandths	1.24
Decimals duration approximately 8 days)	• Add and subtract fractions with the same denominator. • Recognise and write decimal equivalents of any number of tenths or hundredths. • Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer	• Power Maths unit 11 tenths hundredths decimal point 0·1 and 0·01 equivalent whole number rounding greater than (>) less than (<) equal to (=) order compare convert decimal place ascending descending		Spine 1 1.23 Composition and calculation:tenths '___ tenths plus ___ tenths is equal to ten tenths, which is equal to one.' 'One is equal to ten tenths; ten tenths minus ___ tenths is equal to ___ tenths.' '___ is between ___ and ___.' '___ is the previous whole number.' '___ is the next whole number.'	•

- as ones, tenths and hundredths.
- Compare numbers with the same number of decimal places up to two decimal places.
- Round decimals with one decimal place to the nearest whole number
- Recognise and write decimal equivalents to 1 4 , 1 2 and 3 4
- Solve simple measure and money problems involving fractions and decimals to two decimal places.

- 1.24 Composition and calculation:hundredths and thousandths

'___ is ten times bigger than ___.'
'___ is ten times smaller than/one tenth the size of ___.'
'___ is one hundred times bigger than ___.'
'___ is one hundred times smaller than/one hundredth the size of ___.'

say ___-point-___-___ but I think ___ and ___ hundredth(s).'

'___ hundredths plus ___ hundredths is equal to ten hundredths, which is equal to one tenth.'

'One tenth is equal to ten hundredths; ten hundredths minus ___ hundredths is equal to ___ hundredths.'

Measure Money duration approximately 5 days)	• Solve simple measure and money problems involving fractions and decimals to two decimal places. • Estimate, compare and calculate different measures, including money in pounds and pence. • Solve simple measure and money problems involving fractions and decimals to two decimal places.	• Power Maths unit 12 notes coins pounds (£) pence (p) add subtract change round to the nearest order greater than (>) less than (<) cheaper more expensive estimate over estimate under estimate total notation	Spine 1 • 1.25 Addition and Subtraction:money *'First we add: ___ plus ___ is equal to ___...'* *'...then we adjust: ___ minus ___ is equal to ___.'* *'One pound is equal to ten groups of ten pence.'* *'Ten pence is equal to ten pennies.'*	•
Measure Time duration approximately 6 days)	• Convert between different units of measure (for example, kilometre to metre; hour to minute). • Read, write and convert time between analogue and digital 12- and 24-hour clocks. • Solve problems involving	• Power Maths unit 13 convert compare units of time seconds minutes hours days weeks months years 12-hour 24-hour analogue digital am/pm	•	•

	converting from hours to minutes; minutes to seconds; years to months; weeks to days.			
Statistics

duration approximately 5 days) | -Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.

-Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. | Power Maths unit 15

data   line graph   pictogram

bar chart   table   altogether

more than   greatest   smallest

continuous data   compare | | |
| Geometry

Position and Direction

duration approximately 8 days) | Describe positions on a 2D grid as coordinates in the first quadrant. Plot specified points and draw sides to complete | Power Maths unit 16 | | 4G–1 Draw polygons, specified by coordinates in the first quadrant, and translate within the |

	a given polygon. Describe positions on a 2D grid as coordinates in the first quadrant. Describe movements between positions as translations of a given unit to the left/right and up/down.	position horizontal vertical up down left right coordinate square rectangle plot vertex vertices point grid		first quadrant.