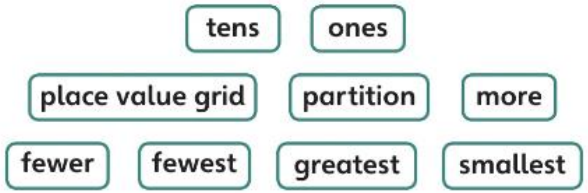
BILSTON CHURCH OF ENGLAND PRIMARY

MEDIUM TERM PLANNING

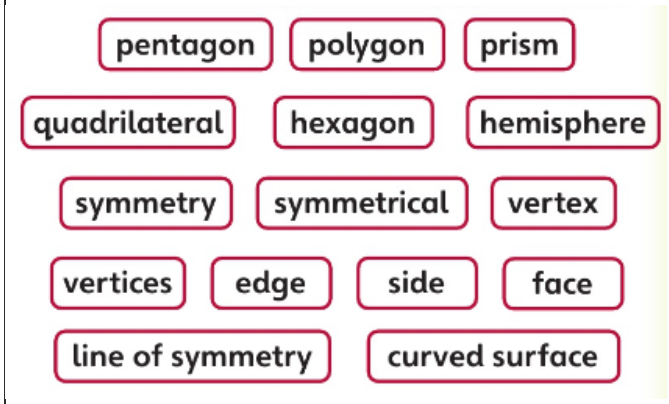
Subject	Year Group	Term
Maths	2	Autumn

Topic	National Curriculum Objectives	Power Maths Unit	NCETM Professional development documents	Ready to progress Criteria
Number and Place Value (approximate duration 17 days)	• Read and write numbers to at least 100 in numerals and in words. • Identify, represent and estimate numbers using different representations, including the number line • Recognise the place value of each digit in a two-digit number (tens, ones). • Identify, represent and estimate numbers using different representations, including the number line • Compare and order numbers from 0 up to 100; use >, < and = signs.	• Power Maths Unit 1 	See Year 1 Spine 1 for revision points	• 2NPV–1 Recognise the place value of each digit in two-digit numbers, and compose and decompose twodigit numbers using standard and non-standard partitioning. • 2NPV–2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.

	• Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.			
Addition and Subtraction (approximate duration 13 days)	• Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • Solve problems with addition and subtraction: – using concrete objects and pictorial representations, including those involving numbers, quantities and measures – applying their increasing knowledge of mental and written methods. • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: – a two-digit number and ones – a two-digit number and tens – two two-digit numbers –	• Power Maths unit 2 add subtract difference sum fact family number sentence total number bonds multiples plus minus	Spine 1 1.11 Addition and subtraction: bridging 10 ***'There are ___, ___ and ___. Altogether there are ___.'*** Use a stem sentence with the structure: ***'First..., then..., then..., now...'*** ***'___ plus ___ is equal to ten, then ten plus ____ is equal to ___.'*** ***'First I partition the ___:___ plus ____ is equal to ____'*** ***'Then ___ plus ___ is equal to ten...'*** ***'...and ten plus ___ is equal to ___.'*** 1.12 Subtraction as a difference 1.13 Addition and subtraction: two digit and single digit numbers ***'___ is one more than ___. ___ is equal to ___ plus one. ___ plus one is equal to ___.'*** ***'___ is one less than ___. ___ minus one is ___. The difference between ___and ___ is one.'***	• 2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice. • 2AS–1 Add and subtract across 10.

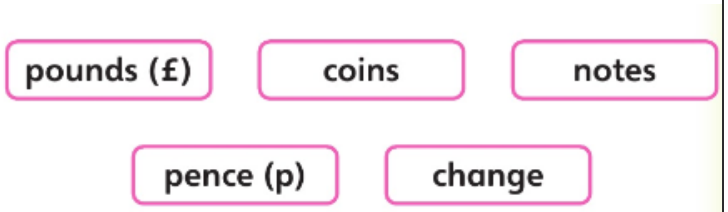
	adding three one-digit numbers.		***'I know that ___ plus ___ is equal to ___...'*** (single-digit fact) ***'...so ___ plus ___ is equal to ___.'*** (related two-digit plus single-digit calculation) ***'I know that ___ minus ___ is equal to ___...'*** (single-digit fact) ***'...so ___ minus ___ is equal to ___.'*** (related two-digit minus single-digit calculation)	
Addition and Subtraction (approximate duration 12 days)	• Solve problems with addition and subtraction: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods. • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers.	• Power Maths Unit 3 (total tens ones subtract difference 10 more 10 less bar model represent	Spine 1 1.13 Addition and subtraction: two digit and single digit numbers ***'I know that ___ minus ___ is equal to ___...'*** (single-digit fact) ***'...so ___ minus ___ is equal to ___.'*** (related two-digit minus single-digit calculation) ***'I know that ___ plus ___ is equal to ___...'*** (single-digit fact) ***'...so ___ plus ___ is equal to ___.'*** (related two-digit plus single-digit calculation) ***'___ tens and ___ ones, plus ___ tens, is equal to ___ tens and ___ ones.'***	• 2AS–2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?". • 2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. • 2AS–4 Add and subtract within 100 by applying related one-

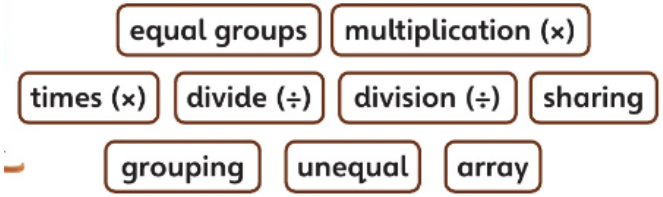
			1.14 1.13 Addition and subtraction: two digit and multiples of ten ***'Ten more than ___ is ___. ___ is ten more than ___.'*** ***'Ten less than ___ is ___. ___ is ten less than ___.'*** ***'___ is one more than ___. ___ is equal to ___ plus one. ___ plus one is equal to ___.'*** ***'___ is one less than ___. ___ minus one is ___. The difference between ___and ___ is one.'*** ***'I know that ___ plus ___ is equal to ___.'*** ***'So, ___ tens plus ___ tens is equal to ___ tens.'*** ***'I know that ___ minus ___ is equal to ___.'*** ***'So, ___ tens minus ___ tens is equal to ___ tens.'*** ***'One part is ten, the other part is ___, and the whole is ___.'*** ***'This can be recorded as ten plus ___ is equal to ___, or as ___ plus ten is equal to ___.'*** ***'___ tens and ___ ones, plus ___ tens, is equal to ___ tens and ___ ones.'*** ***'First I partition the ___ into ___ and ___, and the ___ into ___ and ___.'*** (partitioning the two-digit addends) ***'___ plus ___ is equal to ___...'*** (addition of the tens) ***'...___ plus ___ is equal to ___...'*** (addition of the ones) ***'...and ___ plus ___ is equal to ___.'*** (addition of the totals of tens and ones) ***'So ___ plus ___ is equal to ___.'***	digit addition and subtraction facts: add and subtract any 2 two-digit numbers.

Properties of Shapes (approximate duration 12 days)	• Compare and sort common 2D and 3D shapes and everyday objects. • Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line. • Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. • Order and arrange combinations of mathematical objects in patterns and sequences. • Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. • Identify 2D shapes on the surface of 3D shapes, (for example, a circle on a cylinder and a triangle on a pyramid).	• Power Maths unit 4 		• 2G–1 Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties.

MEDIUM TERM PLANNING

Subject	Year Group	Term
Maths	2	Spring

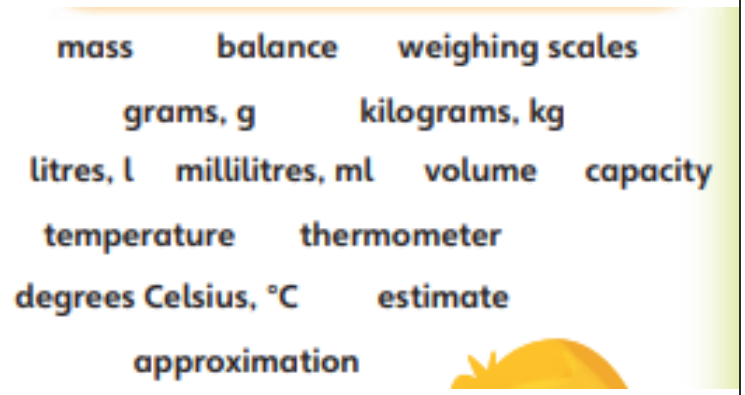
Topic	• National Curriculum Objectives	Power Maths Unit	• NCETM Professional development documents	• Ready to progress Criteria
Measure Money (duration approximately 10 days)	• Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. • Find different combinations of coins that equal the same amounts of money. • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	Power Maths Unit 5 		•

Multiplication and Division (duration approximately 8 days)	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. ● Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including	Power Maths Unit 6 	Spine 2 Before grouping: ***'There are some ___.'*** After grouping: ***'The ___ have been grouped.'*** ***'The groups are <u>equal</u> because there are <u>the same number</u> of ___ in each group.'*** ***'The groups are <u>unequal</u> because there are <u>a different number</u> of ___ in each group.'*** 2.2 Structures: multiplication representing equal groups ***'There are ___ equal groups of ___.'*** ***'There are ___ ___ in each group.'*** ***'There are ___ groups of ___.'*** ***'There are ___ and ___ and ___ and...'*** ***'We can write this as ___ plus ___ plus ___ plus...'*** 2.3 Times tables: groups of 2 and commutativity (part 1) ***'Factor times factor is equal to the product.'*** ***'The product is equal to factor times factor.'***	● 2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.

	problems in contexts. Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. •		2.4 Times tables: groups of 10 and 5. And factors of 0 and 1 ***'___ is a factor.'*** ***'___ is a factor.'*** ***'The product of ___ and ___ is ___.'*** ***'___ is the product of ___ and ___.'*** 2.5 Commutativity (parts 2) Doubling and halving Use the following stem sentence (algebraic terms for teachers only): ***'_a_ times _b_ can represent _a_ groups of _b_. It can also represent _b_ groups of _a_ (or _a_ , _b_ times).'*** sentence: ***'If there are ___ equal groups, we can use the ___ times table.'*** ***___ is a factor, we can use the ___ times table.'*** ***'There are two groups of ___.'*** ***'There are ___, two times.'*** ***'This is the same as double ___.'*** ***'Double ___ is equal to ___.'*** ***'Ten is double five, so ___ tens is double ___ fives.'*** ***'Five is half of ten, so ___ fives is half of ___ tens.'***	

			2.6 ***'Factor times factor is equal to the product.'*** ***'The product is equal to factor times factor.'***	
Multiplication And Division (duration approximately 10 days)	• Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. • Recall and use multiplication and division facts for the	Power Maths unit 7 **divide (÷)** **division (÷)** **share** **group** **odd** **even** **times-table**	Spine 2 2.2 Structures: multiplication representing equal groups ***'There are ___ equal groups of ___.'*** ***'There are ___ ___ in each group.'*** ***'There are ___ groups of ___.'*** 2.3 Times tables: groups of 2 and commutativity (part 1) ***'Factor times factor is equal to the product.'*** ***'The product is equal to factor times factor.'***	• MD–2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).

	2, 5 and 10 multiplication tables including recognising odd and even numbers		2.4 Times tables: groups of 10 and 5. And factors of 0 and 1 ***'___ is a factor.'*** ***'___ is a factor.'*** ***'The product of ___ and ___ is ___.'*** ***'___ is the product of ___ and ___.'*** 2.5 Commutativity (parts 2) Doubling and halving ***'There are two groups of ___.'*** ***'There are ___, two times.'*** ***'This is the same as double ___.'*** sentence: ***'If there are ___ equal groups, we can use the ___ times table.'*** ***'Double ___ is equal to ___.'***	
Measure Length and Height (duration approximately 5 days)	• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers	Power Maths unit 8 **length centimetres cm** **metres m longer shorter** **metre sticks height width** **compare distance**		•

	and measuring vessels. • . Compare and order lengths, mass, volume/capacity and record the results using >, < and =. • Solve problems with addition and subtraction: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods.			
Measure Weight, volume, capacitu and temperature (duration approximately 8 days)	Compare, describe and solve practical problems for: - lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) - mass/weight (for example, heavy/light, heavier than, lighter than) - capacity and volume (for example, full/empty, more than, less than, half,	Power Maths unit 9 		•

	half full, quarter) – time (for example, quicker, slower, earlier, later). ● Compare and order lengths, mass, volume/capacity and record the results using >, < and =. ● Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. ● 			

MEDIUM TERM PLANNING

Subject	Year Group	Term
Maths	2	Summer

Topic	• National Curriculum Objectives	• Power Maths Unit	• NCETM Professional development documents	• Ready to progress Criteria
Fractions (approximately 3 weeks)	• Recognise, find, name and write fractions 1 3 , 1 4 , 2 4 and 3 4 of a length, shape, set of objects or quantity. • Write simple fractions for example, 1 2 of 6 = 3 and recognise the equivalence of 2 4 and 1 2 .	• Power Maths 10 half ($\frac{1}{2}$) quarter ($\frac{1}{4}$) whole third ($\frac{1}{3}$) eqivalent equal part numerator denominator fraction bar non-unit fraction unit fraction	•	•
Measure Time (approximately 2 weeks)	• Measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds). • Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.	• Power Maths unit 11 o'clock half past quarter past quarter to minute hand hour hand duration	•	•

	• Know the number of minutes in an hour and the number of hours in a day. • Compare and sequence intervals of time • Compare durations of events (for example to calculate the time taken by particular events or tasks). •			
Statistics (approximately 1 weeks)	• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. • Ask and answer questions about totalling and comparing categorical data. •	• Power Maths unit 12 **tally chart** **pictogram** **key**	•	•
Position and Direction (approximately 2 weeks)	• Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise). • Order and arrange combinations of mathematical objects in patterns and sequences.	• Power Maths unit 11 **clockwise** **anticlockwise** **forwards** **backwards** **left** **right** **middle** **turn** **half turn** **quarter turn** **three-quarter turn**	•	•