



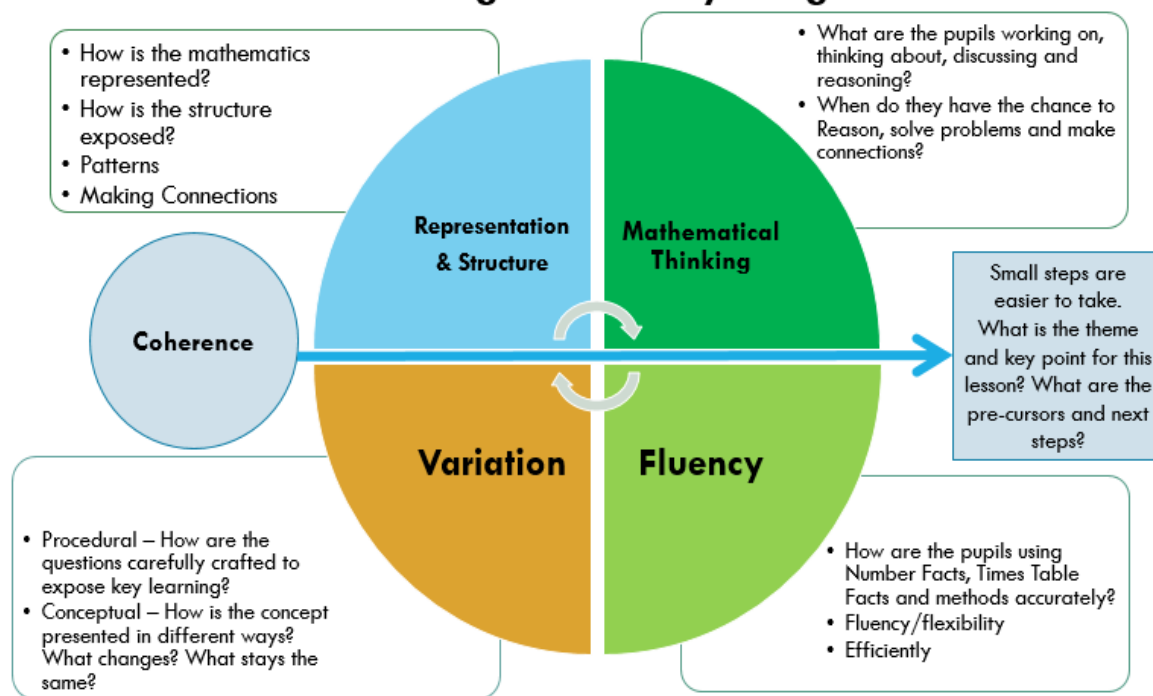
Westbury-on-Severn  
CE Primary School

## Westbury Maths Curriculum

At Westbury, we teach maths using a Mastery Approach- our planning is informed by the **5 Big Ideas** outlined in the diagram. We teach both knowledge and skills through the use of small, manageable steps which allows for strong progression throughout the year and across the age ranges. Although we have mixed aged classes, our Maths curriculum is taught to each year group individually. We take our small steps from the Can Do scheme but adapt and use our own resources alongside, where needed. Our Maths is taught to every year group on a daily basis, with job shares and PPA cover teaching separate topics to allow for continuity within progression and to allow for teachers to pick up on misconceptions taught in previous lessons. Our lesson design follows the same format for Years 1-6 with each lesson having a **Do It, Explain It** and **Deepen It** section. This allows for the children to practise the skills taught in the lesson as well as having an opportunity to reason and problem solve.

We teach **KIRFS** (Key Instant Recall Facts) at the start of every lesson to practise quick recall of number facts for each year group. This is planned based on the KIRF timetable (see below). In 2022 we begun the programme called **Mastering Number** which is taught to Reception, Year 1 and Year 2. We follow this programme which has a lesson 4 days a week to develop the children's basic number skills such as subitising. For assessment we use the **Remember It tests** from the Can Do programme. These are termly tests which assess the children on what they have been taught and include arithmetic questions as well as reasoning and problem solving. We use these assessments to inform our planning of interventions and to plan for misconceptions in the future as well as to keep a record of progress throughout the year.

### Teaching for Mastery 5 big ideas





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## **Westbury Lesson Design**

Each part of the lesson design is taught first with the pupils working with the teacher as a year group. The pupils then complete their independent learning, working through the Do It, Explain It and Deepen It.

### **KIRF**

5-10 minutes spent practising quick recall of key facts.

### **Do It**

#### ***What it is, what it is also***

a new skill as a manageable step

### **Explain It**

#### ***What it is not***

Explaining a misconception, a mistake; orally with the teacher and in writing independently.

### **Deepen It**

#### ***Apply their learning, problem solving***

Word problem or challenge to apply what they have learnt in a deeper, way

## Key Instant Recall Facts (KIRFs)

	Preschool	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
A u t 1	Recognise and recite the number names to 5. Touch count to 3.	Name numbers in order to 10 and compare 2 numbers by saying which is more or less.	Recite the number names in order to 50 and beyond.	Recite the number names in order to 100. I know number bonds to 10. I know number bonds to 20.	I know number bonds for all numbers up to 20. Count in 50s and 100s.	I know number bonds to 100. Count in 25s and 1000s.	I know the multiplication and division facts for all times tables up to $12 \times 12$ .	I know the multiplication and division facts for all times tables up to $12 \times 12$ .
A u t 2	Recite the number names in order to 5. Touch count to 5.	Recognise quantities, without counting, up to 5. (Subitise)	I can add 0 or 1 to a number. I can add 2 to a number.	I know doubles and halves of numbers to 20. I know near doubles to 10. I can use bridging and compensation for addition to $10+10$ .	Count in 3s. I know the multiplication and division facts for the 3 times table. (up to $12 \times 3$ )	Count in 6s. I know the multiplication and division facts for the 6 times table. (up to $12 \times 6$ )	I can find factor pairs of a number.	I can identify common factors of a pair of numbers.
S p r 1	Use the language: before, after, next.	I can say 1 more than a given number up to 10.	I know number bonds to 10. I know odd and even numbers to 20.	Count in 2s. I know the multiplication and division facts for the 2 times table. (up to $12 \times 2$ )	Count in 4s. I know the multiplication and division facts for the 4 times table. (up to $12 \times 4$ )	Count in 9s and 11s. I know the multiplication and division facts for the 9 and 11 times tables. (up to $12 \times 9$ and $12 \times 11$ )	I can identify prime numbers up to 20. I can recall square numbers up to 144 and their square roots.	I can identify prime numbers up to 50. Know the square roots of square numbers to $15 \times 15$
S p r 2	Sort objects and say which group is more/less.  Name simple shapes.	Partition numbers to 5 into 2 groups.	Count in 2s to 20. Count in 10s to 100. Count in 5s to 50.	Count in 5s and 10s. I know the multiplication and division facts for the 10 and 5 times table. (up to $12 \times 10$ and $12 \times 5$ )	Count in 8s. I know the multiplication and division facts for the 8 times table. (up to $12 \times 8$ )	Count in 7s and 12s. I know the multiplication and division facts for the 7 and 12 times table. (up to $12 \times 7$ and $12 \times 12$ )	Know the decimal and percentage equivalents of the fractions $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{3}{4}$ , $\frac{1}{3}$ , $\frac{2}{3}$ , tenths and fifths	Know the decimal and percentage equivalents of the fractions $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{3}{4}$ , $\frac{1}{3}$ , $\frac{2}{3}$ , tenths and fifths
S u m 1	Recite number names to 10.	Recall number bonds of numbers 0-10, including partitioning facts.  Know some odd and even numbers to 10.	I can add 10 to a number.	Count in 3s to 36.	Count up and down in tenths. I can recognise decimal equivalents of tenths.	I can recognise decimal equivalents of the fractions $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{3}{4}$ , tenths and hundredths.	I know decimal number bonds to 1 and 10.	Revisit previous KIRFS
S u m 2	Recite number names in order to 10.	Recite number names in order to 20. Automatically recall doubles facts up to $5+5$ .	I know doubles and halves of numbers to 10. I know near doubles to 5.	To begin to know the 3 times tables. (up to $10 \times 3$ )	I can multiply and divide 1 digit numbers by 10.	I can multiply and divide 1 and 2-digit numbers by 10 and 100.	Revisit previous KIRFS	Revisit previous KIRFS

## Oak class Year 4 – Maths

### Autumn term

Week	Topic	Year 4 Objective LRB	Topic	Year 4 Objective Friday SS
1	Number and place value	Represent 4-digit numbers	Geometry: Properties of Shapes	
		Recognise the value of digits in 4-digit numbers		
		Read 4-digit numbers in words and write using numerals		
		Read 4-digit numbers in words and write using numerals including zero as a place holder		
				Identify and describe an equilateral triangle
2		Identify 4-digit numbers on a number line		
		Count in multiples of 25 from zero		
		Find 1000 more than a given number		
		Find 1000 less than a given number		
3		Compare two 4-digit numbers		Identify and describe an isosceles triangle
		Order 4-digit numbers with the same and different thousands		
		Round 2-digit numbers to the nearest 10		
		Round 3-digit numbers to the nearest 10		
				Identify and describe a scalene triangle
4		Round 4-digit numbers to the nearest 10		
		Round 3-digit numbers to the nearest 100		
		Round 3 and 4-digit numbers to the nearest 100		
		Round 4-digit numbers to the nearest 1000		
				Identify and describe a parallelogram

5		Count backwards through zero to include negative numbers		
		Read Roman numerals to 100		
		Identify and describe a trapezium		
		Identify and describe a kite		
				Identify and describe a rhombus
6		Classify 2D shapes		
		Identify lines of symmetry of a 2D shape and a pattern		
		Use a line of symmetry to produce a symmetrical pattern		
		Use a line of symmetry to complete a symmetrical shape		
				<b><u>End of term Remember it 1</u></b>
7	Addition and Subtraction: Mental Methods Addition	Add ones to 4-digit numbers (where the thousands change)	Multiplication and Division: Multiplication Tables	
		Add tens to 4-digit numbers (where the hundreds change)		
		Add tens to 4-digit numbers (where the thousands change)		
		Add hundreds to 4-digit numbers (where the thousands change)		
				Recall and use multiplication facts for the 6 times table
8		Add 3-digit number to 4-digit number using rounding to the nearest hundred and then compensating		
		Add two 4-digit numbers using rounding to the nearest thousand and then compensating		
		Add two 3-digit numbers where the sum exceeds 1000, choosing an efficient mental strategy		
		Subtract ones from 4-digit number (where the hundreds change)		
				Recall and use division facts for the 6 times table
9	Subtract ones from 4-digit number (where the thousands change)			
	Subtract tens from 4-digit number (where the hundreds change)			
	Subtract tens from 4-digit number (where the thousands change)			
	Subtract hundreds from 4-digit number (where the thousands change)			

				Recall and use multiplication facts for the 9 times table
10		Subtract 3/4-digit number from a 4-digit number using rounding to the nearest thousand and then compensating		
		Subtract 3/4-digit number from a 4-digit number using rounding to the nearest thousand and then compensating		
		Subtract by finding the difference between two 4-digit numbers by counting on		
		Recall and use multiplication facts for the 7 times table		
				Recall and use division facts for the 9 times table
11		Recall and use division facts for the 7 times table		
		Know and use the effect of multiplying by 0		
		Know and use the effect of multiplying by 1		
		<b><u>End of term Remember its</u></b>		
				Extra – word problems

### Spring term

Week	Topic	Year 4 objective LRB	Topic	Year 4 Objective JobShare	
1	Addition and Subtraction : Written Methods Addition	Add two 4-digit numbers, no regrouping	Multiplication and Division: Multiplication Tables		
		Use column addition for two 4-digit numbers when regrouping is required in the ones column			
		Use column addition for two 4-digit numbers when regrouping is required in the ten and hundreds column			
		Use column addition for two 3-digit numbers where the sum exceeds 1000			
				Recall and use multiplication facts for the 11 times table	
2		Use column addition for 4-digit and 3-digit numbers when regrouping is required in multiple columns			
		Use column addition for 4-digit and 2-digit numbers when regrouping is required in multiple columns			
		Subtract a 4-digit number from a 4-digit number, no exchanging			
		Use column subtraction for 4-digit numbers when exchanging is required in the tens column			
				Recall and use division facts for the 11 times table	
3	Addition and Subtraction : Written Methods Subtraction	Use column subtraction for 4-digit numbers when exchanging is required in the hundreds column			
		Use column subtraction for 4-digit numbers when exchanging is required in the thousands column			
		Use column subtraction for 4-digit numbers when exchanging is required in multiple columns			
		Use column subtraction for 4-digit and 3-digit numbers when exchanging is required in multiple columns			
			Recall and use multiplication facts for the 12 times table		
4		Use column subtraction for 4-digit and 2-digit numbers when exchanging is required in multiple columns			

		Extra problem solving		
		Extra session to recap		
		Use knowledge of factor pairs (commutativity) when multiplying mentally three numbers together, such as $2 \times 6 \times 5 = 10 \times 6 = 60$		
				Recall and use division facts for the 12 times table
5		Word problems 11 and 12 times tables		
		Multiplication problems solving		
		Multiplication check practice		
		Extra session to recap		
				<b>End of term Remember it</b>
6	Multiplication	Multiply 1-digit numbers by multiples of 10 using place value (6, 7, 9)	Geometry: Properties of Shapes (Angles)	
		Use the distributive law to multiply a two-digit number by a one-digit number (6, 7, 9)		
		Multiply 2-digit number by a 1-digit number using a formal written method (6, 7, 9)		
		Multiply 1 and 2-digit numbers by 100		
7		Multiply 3-digit number by a 1 digit number using a formal written method (regroup ones)		
		Multiply 3-digit number by a 1 digit number using a formal written method (regroup tens)		
		Multiply 3-digit number by a 1 digit number using a formal written method (regroup hundreds)		
		Multiply 3-digit number by a 1 digit number using a formal written method (multiple regroup)		
				Identify obtuse angles
8		Multiplication word problems		
		Divide multiples of a hundred by 100		
		Use known facts and place value when dividing mentally e.g. $120 \div 6$ , $1200 \div 6$ , $1320 \div 12$		
		Divide near multiples by 6, 7, 9, 11 and 12 with remainders		
				Identify acute angles in shapes



9	Division	Use written method to divide a 3-digit number by a single digit number (hundreds < divisor) with no remainder	Division	
		Extra problem solving		
		Divide multiples of ten by 10		
		Divide 3-digit number by a single digit number using partitioning and place value		
				Identify obtuse angles in shapes
10	Division	Use written method to divide a 3-digit number by a single digit number (hundreds = multiple of divisor, tens > divisor) with no remainder	Division	
		Use written method to divide a 3-digit number by a single digit number (hundreds > divisor, one exchange) with no remainder		
		Order angles up to two right angles in size		
		<b><u>End of term Remember its</u></b>		
				Compare angles up to two right angles in size

**Summer term**

Week	Topic	Year 4 Objective LRB	Topic	Year 4 Objective Friday cover
1	Decimals	Recognise that hundredths arise from dividing a number (or object) into one hundred equal parts and dividing tenths by ten	Fractions	
		Read and represent a number with 2 decimal places		
		Count up in hundredths		
		Count down in hundredths		
				Add fractions with the same denominator within and beyond one whole
2	Decimals	Divide a one-digit number by 100	Fractions	
		Divide a two-digit number by 10		
		Divide a two-digit number by 100		
		Compare numbers with 1 dp		
				Subtract fractions with the same denominator within and beyond one whole

3		Compare numbers with 2dp			
		Order numbers with the same number of decimal places			
		Round numbers with 1dp to nearest whole number			
		Convert from pence to pounds			
4		Convert from pounds to pence			Calculate a unit fraction of an amount when the answer is a whole number
		Word problems and problem solving			
		Word problems and problems solving			
		Interpret bar charts with different scales on the frequency axis			
5		Construct a bar chart with different scales on the frequency axis		Addition and subtraction of decimals	
		Interpret a time graph			
		Construct a time graph			
		Extra problems solving session			
6	Statistics	Know and use the decimal equivalents to $\frac{1}{4}$ , $\frac{1}{2}$ , $\frac{3}{4}$			
	Additional Problems solving fractions				
	Use mental strategies to add numbers with 1 dp				
	Use mental strategies to add numbers with 2 dp				
7		Use columnar addition for numbers with 2 decimal places with regrouping (carrying) required			
		Use mental strategies to subtract numbers with 1 dp			
		Use mental strategies to subtract numbers with 2 dp			
		Use columnar subtraction for numbers with 2 decimal places with exchanging required			
		Identify equivalent fractions using diagrams			
		Find families of equivalent fractions			

				<b>End of term Remember its</b>	
8	Measurement: Perimeter and Area	Measure and calculate the perimeter of 2D shapes when dimensions are unknown	Measurement: Time and Converting Units		
		Calculate the perimeter of rectangles (including squares)			
		Calculate the perimeter of other rectilinear shapes when dimensions are known			
		Calculate the perimeter of other rectilinear shapes when dimensions are known			
				Convert from litres to millilitres	
9		Calculate the perimeter of other rectilinear shapes when dimensions are unknown			
		Find the area of rectangles (including squares) by counting squares			
		Find the area of other rectilinear shapes by counting squares			
		Area problems solving			
				Convert from kilograms to grams	
10		Use coordinates to describe the position of a point in the first quadrant			
		Plot points in the first quadrant using coordinates			
		Use coordinates to plot a set of points to construct a polygon			
		Describe movements between positions as translations of a given unit to the left/right			
			Convert from kilometres to metres		
11	Geometry: Position and Direction	Describe movements between positions as translations of a given unit up/down			
		Convert from hours to minutes			
		Convert from weeks to days			
		Convert from years to months			
			Extra problem solving		
12		Convert 12-hour digital time to 24-hour time			
		Convert from 12-hour analogue time to 24-hour time			
		Convert from 24-hour time to 12-hour analogue time			

		Additional catch up session		
				<b>End of term Remember its</b>
13		Ready for year 5 tasks		Ready for year 5 tasks
		Ready for year 5 tasks		Ready for year 5 tasks
		Ready for year 5 tasks		Ready for year 5 tasks
		Ready for year 5 tasks		Ready for year 5 tasks
		Ready for year 5 tasks		Ready for year 5 tasks
14		Ready for year 5 tasks		Ready for year 5 tasks
		Ready for year 5 tasks		Ready for year 5 tasks
		Ready for year 5 tasks		Ready for year 5 tasks
		Ready for year 5 tasks		Ready for year 5 tasks
		Ready for year 5 tasks		Ready for year 5 tasks