

Year 1

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Place Value (within 10)		Year 1 - Autumn Block 1
Step	Knowledge	
1. Sort objects	Know that collections of objects can be sorted into sets based on attributes such as colour, shape or size.	
2. Count objects	Know how to count to 10 when counting objects; know how to count using the counting principles.	
3.Count objects from a larger group	Know how to count specific objects from a large group.	
4. Represent objects	Know how to match real-life objects using manipulatives.	
5. Recognise numbers as words.		
6. Count on from any number.		
7. 1 more	Know that 1 more is the number after.	
8. Count backwards within 10.		
9.1 less	Know that 1 less is the number before.	
10.Compare groups by matching	Know how to match one object with another to compare groups (1-1 correspondence).	
11.Fewer, more, same	Know how to compare numbers of objects.	
12.Less than, greater than, equal to	Know how to comparing numerical values using the vocabulary “less than”, “greater than” or “equal to” alongside the symbols $<$, $>$ and $=$.	
13.Compare numbers	Know how to compare numbers within	
14.Order objects and numbers	know how to order three groups of objects, alongside numbers.	
15.The number line	Know how to use a number line to consolidate knowledge from this block	
Vocab	National Curriculum Objectives	
Sort, group, number track, digit, pattern, one more, one less, matched, fewer, greater than ($>$), less than ($<$), equal to ($=$), most, least, fewest, greatest, number line, order, tens (10s), ones (1s), more, smallest, number bond, fact family, compare, 100 square, number square, place value grid.	- Count to ten, forwards and backwards, beginning with 0 or 1, or from any given number. - Count, read and write numbers to 10 in numerals and words. - Given a number, identify one more or one less. - Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Addition and Subtraction (within 10)		Year 1 - Autumn Block 2
Step	Knowledge	
1. Introduce parts and wholes and part whole model	Know that a whole group of objects can be composed of two or more parts and that they can represent this using a part-whole model.	
2. Write number sentences	Know that the addition symbol (+) can be used to represent combining two or more parts and the equals symbol (=) can be used to show the equivalence between the whole and the sum of the parts.	
3. Fact families (addition facts)	Know that the order of an addition sentence can be varied and begin to discover that addition is commutative.	
4. Number bonds within 10	Know how fact families and the part-whole model help us calculate number bonds within 10.	
5. Systematic number bonds within 10	Know how to work systematically to find all number bonds within 10.	
6. Number bonds to 10		
7. Addition (add together)	Understand that addition can mean bringing two or more parts together to create a whole.	
8. Addition: adding more	Understand that adding more can mean increasing one quantity by a given amount.	
9. Additional problems	Know that 1 less is the number before.	
10. Find a part	Know how their knowledge of number bonds can help them find missing parts of the whole.	
11. Subtraction (find the part)	Recognise the subtraction symbol and know that subtraction is about finding the part.	
12. Fact families (the eight facts)	Understand that there are 8 facts in a fact family.	
13. Subtraction (take away - how many left?)	Know that subtraction means taking away	
14. Subtraction on a number line	Know how to use counting back on a number line to solve subtraction calculations.	
15. Add or subtract 1 or 2	Apply their knowledge from this block to add and subtract 1 or 2 in different contexts.	
Vocab	National Curriculum Objectives	
Group, plus, part-whole model, whole, part, number sentence, altogether, in total, add, count on, missing part, how many are left?, in total, taken away, subtract, subtraction, addition, count backwards, How many more?, How many fewer?, difference.	- Represent and use number bonds and related subtraction facts within 10. - Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) - Add and subtract one-digit numbers to 10, including zero. - Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Shape		Year 1 - Autumn Block 3
Step	Knowledge	
1. Recognise and describe 3D shapes	Know the names of simple 3-D shapes such as cubes, cuboids, cylinders, pyramids, cones and spheres.	
2. Sort 3D shapes	Know how to sort 3D more formally according to simple properties including type, size and colour. Identify how given groups of shapes have been sorted.	
3. Recognise and name 2D shapes	Know the names of simple 2D shapes such as triangles, squares, rectangles and circles. Know that 2D shapes are completely flat.	
4. Sort 2D shapes	Know how to sort 2D according to simple properties including type, size and colour.	
5. Patterns with 2D and 3D shapes	Know how to create and recognise patterns made from 2D and 3D shapes: experience repeating patterns (ABAB) and symmetrical patterns (ABBCBBA). Recognise the rule within a pattern and use this to continue it in any direction.	
Vocab	National Curriculum Objectives	
3D, cube, cuboid, sphere, pyramid, cylinder, cone, 2D, circle, triangle, square, rectangle, face, repeated.	Recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and triangles]; 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].	

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Number: Place Value (within 20)		Year 1 - Spring Block 1
Step	Knowledge	
1. Count within 20.		
2. Understand 10	Understand the place value of 10 and use a range of representations to show this.	
3. Understand 11, 12 and 13	Understand the place value of 11, 12 and 13 and use a range of representations to show this.	
4. Understand 14, 15 and 16	Understand the place value of 14, 15 and 16 and use a range of representations to show this.	
5. Understand 17, 18 and 19	Understand the place value of 17, 18 and 19 and use a range of representations to show this.	
6. Understand 20	Understand the place value of 20 and use a range of representations to show this.	
7. Count one more and one less	Understand the one more means one more 1 not one more 10 when encountering 2-digit numbers.	
8. The number line to 20	Understand how to use a number line to consolidate knowledge from this block and Block 1 Autumn term	
9. Use a number line to 20	Know how to use a number line to consolidate knowledge from this block and Block 1 Autumn term	
10. Estimate on a number line to 20	Begin to estimate on a number line exploring the halfway point	
11. Compare numbers to 20	Know how to compare numbers to 20.	
12. Order numbers to 20	Know how to order numbers to 20.	
Vocab	National Curriculum Objectives	
Sort, group, number track, digit, pattern, one more, one less, matched, fewer, greater than (>), less than (<), equal to (=), most, least, fewest, greatest, number line, order, tens (10s), ones (1s), more, smallest, number bond, fact family, compare, 100 square, number square, place value grid.	- Count to twenty, forwards and backwards, beginning with 0 or 1, from any given number. - Count, read and write numbers to 20 in numerals and words. - Given a number, identify one more or one less. - Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Addition and subtraction (within 20)		Year 1 - Spring Block 2
Step	Knowledge	
1. Add by counting on within 20 –	Understand that addition is commutative, and it is more efficient to start from the biggest number when counting on.	
2. Add ones using number bonds	Know that working systematically helps them to find all number bonds to 20.	
3. Find and make number bonds to 20	Use the knowledge of number bonds to 10 to find number bonds to 20.	
4. Doubles	Know that to build doubles, we can add the two equal quantities together	
5. Near doubles	Know how to use doubles to help work near doubles.	
6. Subtract ones using number bonds	Recognise and use the subtraction symbol within 20	
7. Subtraction counting back	Know how to use the counting back strategy; know that when nothing is taken away, the start number remains the same, or when the whole group is taken away, there will be nothing left..	
8. Subtraction – finding the difference	Know how to make comparisons between two amounts to formally find the difference.	
9. Related Facts	Know that addition and subtraction are inverse operations.	
10. Missing number problems	Know how to use the idea of inverse operations	
Vocab	National Curriculum Objectives	
Group, plus, part-whole model, whole, part, number sentence, altogether, in total, add, count on, missing part, how many are left?, in total, taken away, subtract, subtraction, addition, count backwards, How many more?, How many fewer?, difference.	- Represent and use number bonds and related subtraction facts within 20. - Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs. - Add and subtract one digit and two-digit numbers to 20, including zero. - Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$.	

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Number: Place Value (within 50)		Year 1 - Spring Block 3
Step	Knowledge	
1. Count from 20 to 50	Know how to count forwards and backwards between 20 and 50.	
2. 20, 30, 40 and 50	Understand multiples of 10 up to 50.	
3. Count by making groups of tens	Know how to count objects more efficiently by grouping into tens and ones.	
4. Groups of tens and ones	Know how to describe a number by the number of tens and ones the number is made from.	
5. Partition into tens and ones	Know how to use a part-whole model to partition a number into tens and ones.	
6. The number line to 50	Use a number line to 50.	
7. Estimate on a number line to 50	Understand that estimates are not exact; know how to use the midpoint strategy to facilitate estimation.	
8. 1 more, 1 less	Use their counting skills to find 1 more and 1 less than any number between zero and 50.	
Vocab	National Curriculum Objectives	
Sort, group, number track, digit, pattern, one more, one less, matched, fewer, greater than (>), less than (<), equal to (=), most, least, fewest, greatest, number line, order, tens (10s), ones (1s), more, smallest, number bond, fact family, compare, 100 square, number square, place value grid.	- Count to 50 forwards and backwards, beginning with 0 or 1, or from any number. - Count, read and write numbers to 50 in numerals. - Given a number, identify one more or one less. - Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. - Count in multiples of twos, fives and tens.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Length and Height		Year 1 - Spring Block 4
Step	Knowledge	
1. Compare lengths and heights	Understand the language of length (long, longer, short, shorter, tall and taller); Know that this language will change depending on what type of length or height they are describing; Understand that height is a type of length.	
2. Measure length using objects	Use nonstandard units to measure height and length; know that non-standard units must line up exactly with the object.	
3. Measure length in centimetres	Use a ruler (standard units) to measure length and height; Understand that standard units are needed to measure because objects vary in length and height; Know to measure from 0cm.	
Vocab	National Curriculum Objectives	
long, longer, longest short, shorter, shortest, tall, taller, tallest, length height, compare measure distance ruler centimetre. Measure, estimate.	- Measure and begin to record lengths and heights. - Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half).	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Mass and Volume		Year 1 - Spring Block 5
Step	Knowledge	
1. Heavier and lighter	Understand the language of weight and mass (heavy, light, heavier than, lighter than).	
2. Measure mass	Know how to measure mass of objects using non-standard units	
3. Compare mass	Know how to use language such as 'lighter', 'heavier' or 'equal to' and inequality symbols to compare the mass of two objects.	
4. Full and empty	Understand how to describe the capacity and volume of an object (full, nearly full, empty, nearly empty). Know that capacity is the amount a container can hold. Volume is the amount it is actually holding.	
5. Compare volume	Know how to use the language of "more than" and "less than" to compare volume.	
6. Measure capacity	Know how to use non-standard units to measure capacity; understand the container or non-standard unit must be full.	
7. Compare capacity	Know how to use inequality symbols to compare the capacity of objects.	
Vocab	National Curriculum Objectives	
heavier, heaviest lighter, lightest, full, empty, capacity, balance scales, weight, weigh, balanced, measure, estimate.	- Measure and begin to record mass/weight, capacity and volume. - Compare, describe and solve practical problems for mass/weight: [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter].	

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Number: Multiplication and Division		Year 1 - Summer Block 1
Step	Knowledge	
1. Count in 2s		
2. Count in 10s		
3. Count in 5s.		
4. Recognise equal groups	Know that equal groups require the same quantity in each group.	
5. Add equal groups	Know how to make equal groups of 2, 5 and 10 and work out the total.	
6. Make arrays	Know that arrays should be structured in columns or rows.	
7. Make doubles	Know that double is two groups of a number or an amount.	
8. Make equal groups – grouping	Explore division through grouping	
9. Make equal groups - sharing	Explore division in the form of sharing.	
Vocab	National Curriculum Objectives	
Equal groups, array, row, column, double, twice, share.	- Count in multiples of twos, fives and tens. - Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	

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Number: Fractions		Year 1 - Summer Block 2
Step	Knowledge	
1. Recognise a half of an object or a shape	Recognise half of various shapes and objects in different ways.	
2. Find a half of an object or a shape	Know how to find half of an object or shape.	
3. Recognise a half of a quantity	Know that a half means one of two equal parts	
4. Find a half of a quantity	Know that to find a half, they need two equal groups.	
5. Recognise a quarter of an object or a shape	Recognise quarter of various shapes and objects in different ways.	
6. Find a quarter of an object or a shape	Know that a quarter means one of four equal parts.	
7. Find a quarter of a quantity	Know how to find a quarter of a small quantity using equal sharing.	
Vocab	National Curriculum Objectives	
Half, halves, quarter.	- Recognise, find and name a half as one of two equal parts of an object, shape or quantity. - Recognise, find and name a quarter as one of four equal parts of an objects shape or quantity. - Compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter].	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Position and Direction of Shape		Year 1 - Summer Block 3
Step	Knowledge	
1. Describe turns	Know and use the language 'full', 'half', 'quarter' and 'three quarter' to describe turns made by shapes/objects.	
2. Describe Position -left and right	Know and use the language 'left', 'right' to describe position.	
3. Describe Position – forwards and backwards	Know and use the language "forwards" and "backwards" to describe position.	
4. Describe Position – above and below	Know and use the "above" and "below" to describe position.	
5. Ordinal numbers	Know how to record positions using numerals and the endings "st", "nd", "rd" and "th" as well as the words "first", "second", "third", "fourth" and so on	
Vocab	National Curriculum Objectives	
Turn, half turn, quarter turn, three-quarter turn, whole turn, position, left right forwards backwards, above, below, top, middle, bottom, up, down, in between.	- Describe position, direction and movement, including whole, half, quarter and three quarter turns	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Place Value (within 100)		Year 1 - Summer Block 4
Step	Knowledge	
1. Counting from 50 to 100		
2. Tens to 100	Understand the efficiency of counting in ones compared to grouping in tens	
3. Partition into tens and ones	Continue to group in tens to work out how many tens and ones are in any number to 100.	
4. The number line to 100	Use number lines with different start and end point values that have intervals in both 1s and 10s; label number lines counting up in 1s and 10s; identify missing numbers on a number line.	
5. 1 more, 1 less	Know how to find one more and one less than any number to 100	
6. Comparing numbers with the same number of tens	Know how to compare numbers to 100 using the words "fewer" and "less"	
7. Comparing any two numbers	Know how to compare numbers to 100 using the terms "greater than", "less than" and "equal to" alongside the corresponding equality symbols $>$, $<$ and $=$	
Vocab	National Curriculum Objectives	
Sort, group, number track, digit, pattern, one more, one less, matched, fewer, greater than ($>$), less than ($<$) equal to ($=$), most, least, fewest, greatest, number line, order, tens (10s), ones (1s), more, smallest, number bond, fact family, compare, 100 square, number square, place value grid.	- Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. - Count, read and write numbers to 100 in numerals. - Given a number, identify one more and one less. - Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Money		Year 1 - Summer Block 5
Step	Knowledge	
1. Unitising	Understand that groups containing or representing the same number of things can be treated as ones	
2. Recognising coins	Know the value of different denominations of coins.	
3. Recognising notes	Understand that a note can represent many pounds; understand that one note may be worth many times the value of another note.	
4. Counting in coins	Understand how counting in 2s, 5s and 10s can help them count coins quickly.	
Vocab	National Curriculum Objectives	
Pound, pence, coin, note, pence (p).	Recognise and know the value of different denominations of coins and notes	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Time		Year 1 - Summer Block 6
Step	Knowledge	
1. Before and after	Know how to use language such as 'before', 'after', 'morning', 'afternoon' and 'evening' to describe, sort and order events.	
2. Days of the week	Know the days of the week and that there are 7 days in a week.	
3. Months of the year	Know how to name and sequence the months within a year.	
4. Hours, minutes and seconds	Understand that seconds are a shorter period of time than minutes and minutes are a shorter period of time than hours.	
5. Tell the time to the hour	Know how to tell the time to the nearest hour using an analogue clock; Know that the hour hand is the shorter hand, and the minute hand is the longer hand.	
6. Tell the time to the half hour	Know how to tell the time to the nearest half hour; understand that, at half past the hour, the minute hand has travelled half way around the clock from the twelve and is pointing at the six and the hour hand is half way between the hours.	
Vocab	National Curriculum Objectives	
Before, after, yesterday, today tomorrow, day, week, slower, faster, month, year. calendar date, minute hand, hour hand, o'clock, half past, second, minute, hour.	- Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. - Recognise and use language relating to dates, including days of the week, weeks, months and years. - Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. - Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later]. - Measure and begin to record time (hours, minutes, seconds).	

Year 2

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Place Value		Year 2 - Autumn Block 1
Step	Knowledge	
1. Numbers to 20	Consolidation from Y1.	
2. Count objects to 100 by making 10		
3. Recognise tens and ones	Recognise when something is labelled as 'ten' and understand its value in relation to the corresponding one.	
4. Use a place value chart	Know how to organise numbers onto a place value chart.	
5. Partition numbers to 100	Know how to use standard partitioning.	
6. Write numbers to 100 in words.	Know how to write numbers to 100, understanding the tens within a hundred e.g 4 tens is forty	
7. Flexibly partition numbers to 100		
8. Write numbers to 100 in expanded form.		
9. 10s on the number line to 100	Know the position of 10s on a number line.	
10. 10s and 1s on a number line to 100	Know the numbers that lie between multiples of 10 on a number line.	
11. Estimate numbers on a number line.		
12. Compare objects	Know how to compare objects to 100; use the language of "greater than", "less than" and "equal to" alongside the inequality symbols to compare.	
13. Compare numbers	Know how to compare numbers to 100.	
14. Order objects and numbers	Know that when comparing two objects or numbers, we use 'more' or 'greater', whereas when working in a set, the one with the highest value is the 'most' or the 'greatest'.	
15. Count in 2s, 5s and 10s		
16. Count in 3s		
Vocab	National Curriculum Objectives	
Digit, tens, ones, place value grid, partition, more, fewer, fewest, greatest, smallest, partition	- Read and write numbers to at least 100 in numerals and in words. - 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. - Use place value and number facts to solve problems. - Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward. - Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. - Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later]. - Measure and begin to record time (hours, minutes, seconds).	

Farsley Westroyd: Maths Knowledge within Small Steps

Number: Addition and Subtraction		Year 2 - Autumn Block 2
Step	Knowledge	
1. Bonds to 10		
2. Fact families (addition and subtraction bonds within 20)	Know how to calculate number bonds within 20.	
3. Related facts	Understand how their knowledge of number bonds to 10 can help them solve related facts e.g. $2 + 5 = 7$ so $20 + 50 = 70$.	
4. Bonds to 100 (tens)	Know how to use their knowledge of bonds to 10 and related facts to find bonds to 100.	
5. Add and subtract 1s	Know how to add and subtract 1 from any given number.	
6. Add by making 10	Know how to use their number bonds to 10 to make numbers within 20.	
7. Add three 1-digit numbers	- Know that to add three numbers, you just need to add two of them and then add the third to the answer.	
8. Add to the next 10	Know how to use number bonds to 10 and related facts to make the next 10.	
9. Add across a 10	Know that how to add a 1-digit number to a 2-digit number that cross 10, understanding that ten ones make 10.	
10. Subtract across 10	Know how to subtract from 2-digit numbers less than 20 where crossing 10 is required, using knowledge of previous strategies.	
11. Subtract from a 10	Know how to subtract a 1-digit number from any multiple of 10 within 100; know how their knowledge of fact families can support with this.	
12. Subtract a 1-digit number from a 2-digit number (across a 10)		
13. 10 more, 10 less	Know how to find 10 more or 10 less than a given number within 100	
14. Add and subtract 10s	Know how to add and subtract multiples of 10 from any given number within 100.	
15. Add two 2-digit numbers (not across a 10)	Know how to add two 2-digit numbers (without exchanges).	
16. Add two 2-digit numbers (across a 10)	Know how to add two 2-digit numbers which require an exchange.	
17. Subtract two 2-digit numbers (not across a 10)	Know how to subtract two 2-digit numbers (without exchanges).	
18. Subtract two 2-digit numbers (across a 10)	Know how to subtract two 2-digit numbers which require an exchange.	
19. Mixed addition and subtraction		
20. Compare number sentences	Understand that working out the values of calculations is not always the most efficient method.	
21. Missing number problems	Use knowledge of place value and addition and subtraction in order to find missing numbers in calculations.	
Vocab	National Curriculum Objectives	
fact family, number sentence, number bond, 10 more, 10 less, total, tens ones, subtract, difference, bar model, represent, how many are left?, in total, taken away, subtract, count backwards, How many more?, How many fewer?, difference.	- Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. - 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. - Show that the 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.	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Shape		Year 2 - Autumn Block 3
Step	Knowledge	
1. Recognise 2D and 3D shape (Year 1 recap)		
2. Count sides on 2D shapes	Know that the sides of a shape are the straight lines that form its outline.	
3. Count vertices on 2D shapes	Know that a vertex is formed where two sides meet, and "vertices" is used when referring to more than one vertex.	
4. Draw 2D shapes	.	
5. Lines of symmetry on shapes	Know that a shape is symmetrical when both sides are the same.	
6. Use lines of symmetry to complete shapes		
7. Sort 2D shapes	Know how to sort 2D shapes based on simple properties like size and colour, and more formal properties such as the number of sides and vertices.	
8. Count faces on 3D shapes	Know that a face is the flat or curved surface on a 3D shape and identify the 2D shapes that make these faces.	
9. Count edges on 3D shapes	Know what an edge is formed where two faces meet.	
10. Count vertices on 3D shapes	Know vertices in shapes are the points where two or more line segments or edges meet (like a corner).	
11. Sort 3D shapes		
12. Make patterns with 2D and 3D shapes	Understand the properties of 2D and 3D shapes to create and identify patterns.	
Vocab	National Curriculum Objectives	
Quadrilateral, polygon, pentagon, hexagon, vertex, vertices, line of symmetry, symmetrical, octagon, edge, prism.	- 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.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Money		Year 2 - Spring Block 1
Step	Knowledge	
1. Count money (pence)	Recognise the p symbol; Know how to count in 1p, 2p, 5p and 10p coins and use related facts to count in 20p coins.	
2. Count money (pounds)	Recognise the £ symbol; Know how to count in £1, £2, £5, £10 and £20s.	
3. Count money (notes and coins)		
4. Choose notes and coins	Understand how to make an amount by selecting the correct coins and notes.	
5. Make the same amount	Know that there are different combinations which can make the same amount of money.	
6. Compare amounts of money	Know how to compare money using the inequality symbols.	
7. Calculate with money	Build on their knowledge of addition and subtraction to find the total cost or find the difference in prices.	
8. Make a pound	Understand that £1 is equal to 100p make £1 in different ways and using a variety of coins.	
9. Find change	Identify the amount given and know which strategy is the most efficient to calculate the change.	
10. Two step problems	Find the total, find the difference and calculate change, and combinations of all three within the same question	
Vocab	National Curriculum Objectives	
pound (£), pence (p), coin, note, change.	- 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.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Multiplication and Division		Year 2 - Spring Block 2
Step	Knowledge	
1. Recognise equal groups	Know that groups are equal when they have the same amount, and unequal when they have different amounts.	
2. Make equal groups		
3. Add equal groups	Understand the connection between equal groups and repeated addition	
4. Introduce the multiplication symbol	Recognise and understand the meaning of the multiplication symbol	
5. Multiplication sentences		
6. Use arrays	Understand the commutativity of multiplication facts.	
7. Make equal groups – grouping	Recognise the division symbol and know that division can mean sharing into equal groups.	
8. Make equal groups – sharing	Recognise the division symbol and know that division can mean sharing into equal groups.	
9. 2 times table	Understand the structure of the 2x table.	
10. Divide by 2		
11. Doubling and halving	Know that when doubling a number, we multiply by 2 and when halving a number, we divide by 2	
12. Odd and even numbers	Recognise odd and even numbers.	
13. 10 times table - Understand the structure of the 10x table		
14. Divide by 10		
15. 5 times table	Understand the structure of the 5x table.	
16. Divide by 5		
17. The 5 and 10 times-tables	Understand the relationship between the 5 and 10 times-tables.	
Vocab	National Curriculum Objectives	
equal groups, multiplication ($\times$), times-table, times, divide ($\div$), division, share, group, odd, even.	- Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. - Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) 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. - Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	

Farsley Westroyd: Maths Knowledge within Small Steps

Measurement: Length and Height		Year 2 - Spring Block 3
Step	Knowledge	
1. Measure length (cm)	Know how to measure length and height using a ruler or tape measure; Remember the importance of starting from 0cm.	
2. Measure length (m)	Know how to measure objects in metres and decide whether it is better to measure an object in metres or centimetres.	
3. Compare lengths and heights	Know how to compare lengths and heights using inequality symbols	
4. Order lengths and heights	Know how to order objects based on their length and height, measuring these beforehand	
5. Four operations with lengths and heights	Understand how their knowledge of the four operations can help them solve problems involving length	
Vocab	National Curriculum Objectives	
long, longer, longest short, shorter, shortest, tall, taller, tallest, length height, compare measure distance ruler centimetre. Measure, estimate.	- 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. - Compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Mass, Capacity and Temperature		Year 2 – Summer Block 4
Step	Knowledge	
1. Compare mass.		
2. Measure mass in grams –	Know that we use grams as a standard unit to measure mass.	
3. Measure mass in kilograms -	Know that we use kilograms as a standard unit to measure mass.	
4. Four operations with mass-	Solve multi-step problems involving mass.	
5. Compare volume and capacity -	Know how to compare volume and capacity using inequality symbols.	
6. Measure in millilitres	Know that we use millilitres (ml) as a standard unit to measure capacity.	
7. Measure in litres -	Know that we use litres as a standard unit to measure capacity.	
8. Four operations with volume and capacity-	Solve multi-step problems involving volume and capacity.	
9. Temperature	Know that temperature is the measure of how hot or cold something is; know that temperature is measured in degrees centigrade, and we use a thermometer to measure temperature	
Vocab	National Curriculum Objectives	
long, longer, longest short, shorter, shortest, tall, taller, tallest, length height, compare measure distance ruler centimetre. Measure, estimate.	- 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. - Compare and order lengths, mass, volume/capacity and record the results using >, < and =.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Fractions		Year 2 – Summer Block 1
Step	Knowledge	
1. Introduction to parts and whole	Identify the whole and parts of the whole	
2. Equal and unequal parts	Recognise equal and unequal parts of a whole.	
3. Recognise a half	Understand that halving is splitting a whole into two equal parts; Recognise the notation $\frac{1}{2}$ to mean half; understand the terms 'numerator' and 'denominator' and what these represent.	
4. Find half	Know that finding half is the same as dividing by 2.	
5. Recognise a quarter	Understand that they are splitting the whole into 4 equal parts and that each part is one quarter; Recognise the notation $\frac{1}{4}$ to mean a quarter.	
6. Find a quarter	Know that they can find a quarter by sharing into 4 equal groups.	
7. Recognise a third	Understand that one third is equal to one part out of three equal parts.	
8. Find a third	Know how to find a third of a quantity.	
9. Find the whole	Use a fraction of an amount to find the whole.	
10. Unit fractions	Understand the concept of a unit fraction by recognising it as one equal part of a whole; Know that the denominator represents the number of parts that a shape or quantity is split into.	
11. Non unit fractions	Recognise the non-unit fractions $\frac{2}{3}$ and $\frac{3}{4}$; Know that the numerator and denominator are the same when the fraction is Equivalent to one whole.	
12. Recognise the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$	Know that $\frac{1}{2}$ and $\frac{2}{4}$ are the same.	
13. Recognise three quarters	Understand $\frac{3}{4}$ by using their knowledge of quarters.	
14. Find three quarters	Know that they first need to find a quarter by sharing into 4 equal groups.	
15. Count in fractions up to a whole	Understand that fractions can be greater than 1.	
Vocab	National Curriculum Objectives	
Whole, equal, equal parts, $\frac{1}{2}$, fraction, denominator, fraction bar, numerator, $\frac{1}{4}$, $\frac{3}{4}$, third $\frac{1}{3}$, unit fraction, non-unit fraction, Equivalent.	- Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity. - Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Time		Year 2 – Summer Block 2
Step	Knowledge	
1. O'clock and half past	Recap knowledge from Y1.	
2. Quarter past and quarter to	Know how to read and draw the times 'quarter past' and 'quarter to'.	
3. Tell the time past the hour	Know how to read and show analogue time to 5-minute intervals past the hour.	
4. Tell the time to the hour	Know how to read and show analogue time to 5- minute intervals before the hour.	
5. Tell the time to 5 minutes	Know how to read and show analogue time to 5-minute intervals both past and to the hour.	
6. Minutes in an hour	Know that there are 60 minutes in an hour.	
7. Hours in a day	Know that there are 24 hours in a day.	
Vocab	National Curriculum Objectives	
o'clock, half past, quarter past, quarter to, minute hand, hour hand, duration.	- 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. - Know the number of minutes in an hour and the number of hours in a day. - Compare and sequence intervals of time.	

Farsley Westroyd: Maths Knowledge within Small Steps



Statistics		Year 2 – Summer Block 3
Step	Knowledge	
1. Make tally charts –	Understand that tally charts as a systematic method of recording data	
2. Tables	Compare tally charts and tables and understand that a table is easier to read, but a tally chart is more efficient when collecting data	
3. Block diagrams	Draw and interpret block diagrams	
4. Draw pictograms (1 1)	Use tally charts to produce pictograms	
5. Interpret pictograms (1 1)	Interpret and answer questions about the data presented in pictograms.	
6. Draw pictograms (2, 5 and 10)	Draw pictograms where the symbols represent 2, 5 or 10 items.	
7. Interpret pictograms (2, 5 and 10).	Interpret pictograms where the symbols represent 2, 5 or 10 items.	
Vocab	National Curriculum Objectives	
Pictogram, key, bar chart, scale, table, row, column, vertical axis, horizontal axis.	- 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.	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Position and Direction		Year 2 – Summer Block 4
Step	Knowledge	
1. Language of position	Use left, right, above, below, between to describe position.	
2. Describe movement	Record and describe movement more formally, in terms of both direction and number of squares.	
3. Describe turns	Draw what an object would look like after a turn and describe the turn that an object has performed.	
4. Describe movement and turns	Describe movement and give instructions to move an object from one place to another.	
5. Shape patterns with turns	Identify what the next shapes in the pattern are and what direction they face.	
Vocab	National Curriculum Objectives	
Clockwise, anticlockwise, forwards, backwards, left, right, middle, turn, half turn, quarter turn, three-quarter turn.	- Identify and describe the properties of 2 D shapes, including the number of sides and line symmetry in a vertical line. - Identify and describe the properties of 3 D shapes, including the number of edges, vertices and faces. - Identify 2 D shapes on the surface of 3 D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]. - Compare and sort common 2 D and 3 D shapes and everyday objects.	

Year 3

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Place Value		Year 3 – Autumn Block 1
Step	Knowledge	
1. Represent numbers to 100	Y2 consolidation.	
2. Partition numbers to 100	Know what each digit represents when partitioning a number.	
3. Number line to 100	Y2 consolidation.	
4. Hundreds	Understand that 10 tens are Equivalent to 1 hundred, and that 100 is 10 times the size of 10.	
5. Represent numbers to 1000		
6. Partition numbers to 1000	Understand the value of hundreds, tens and ones digits in a number when partitioning; understand the purpose of a place holder zero.	
7. Flexible partitioning of numbers to 1000	Understand that numbers to 1000 can be partitioned in a variety of ways.	
8. Hundreds, tens and ones	Understand the structure of a number by considering how many hundreds, tens and ones it is made up of.	
9. Find 1, 10 or 100 more or less		
10. Number line to 1000	Know the exact position of numbers to 1000 on a number line.	
11. Estimate on a number line to 1000	Understand that key intervals need to be factors of 1000; understand that their answers might be different to other children's because they are estimating.	
12. Compare numbers to 1000	Know how to compare numbers to 1000 using concrete resources, pictorial representations, words and symbols.	
13. Order numbers to 1000	Recognise the language of 'smallest' and 'greatest'; know that 'ascending' means smallest to greatest and 'descending' means greatest to smallest.	
14. Count in 50s	Recognise how their 5 x tables supports with counting in 50s	
Vocab	National Curriculum Objectives	
hundreds (100s), tens (10s), ones (1s), digit, place value, more, less, greater than (>), less than (<), equal to, order, compare, partition, estimate, exchange, ascending, descending.	- Identify, represent and estimate numbers using different representations. - Find 10 or 100 more or less than a given number. - Recognise the place value of each digit in a three digit number (hundreds, tens, ones). - Compare and order numbers up to 1000. - Read and write numbers up to 1000 in numerals and in words. - Solve number problems and practical problems involving these ideas. - Count from 0 in multiples of 4, 8, 50 and 100.	

Farsley Westroyd: Maths Knowledge within Small Steps

Number: Place Value		Year 3 – Autumn Block 2
Step	Knowledge	
1. Apply number bonds to 10	Consolidation ready for formal written methods.	
2. Add and subtract 1s	Know how to add and subtract 1s from 3-digit numbers (no crossing)..	
3. Add and subtract 10s	Know how to add and subtract 10s from 3-digit numbers (no crossing)	
4. Add and subtract 100s	Know how to add and subtract hundreds from 3-digit numbers (no crossing).	
5. Spot the pattern	Recognise patterns when subtracting 1s, 10s and 100s from 3-digit numbers	
6. Add 1s across 10	Know how to use mental strategies to add a 1-digit number to a 3-digit number.	
7. Add 10s across 100	Know how to use mental strategies to add multiples of 10 to any 3-digit number where they are required to cross the next hundred.	
8. Subtract 1s across 10	Know how to use mental strategies to subtract a 1-digit number from a 3-digit number, crossing 10	
9. Subtract 10s across 100	Know how to use mental strategies to subtract 10s from 3-digit numbers, crossing a 100.	
10. Make connections	Consolidate steps 6-9.	
11. Add two numbers (no exchange) most appropriate method	Know how to add two 2-digit or two 3-digit numbers using formal written method for column addition.	
12. Subtract two numbers (no exchange)	Know how to subtract two 2-digit or two 3-digit numbers using formal written method for column subtract.	
13. Add two numbers (across a 10)	Know how add two numbers using column addition with exchanges into the tens column; know that when the ones are added together, they will (sometimes) total more than 9.	
14. Add two numbers (across a 100)	Know that 10 tens can be exchanged for one hundred.	
15. Subtract two numbers (across a 10)	Know how to subtract both 2- and 3-digit numbers, exchanging 1 ten for 10 ones.	
16. Subtract two numbers (across a 100)	Know how to make exchanges across 100. Recognise whether they need to make an exchange	
17. Add 2 digit and 3-digit numbers	Know how to add 2-digit and 3-digit numbers together using column addition.	
18. Subtract a 2-digit number from a 3-digit number	Know how to subtract 2-digit and 3-digit numbers using column subtraction.	
19. Complements to 100	Know the complements to 100 for any given starting number.	
20. Estimate answers	Understand why estimates are important in real life; know that estimates allow us to quickly and easily get an idea of what an answer should be near to, or if an already calculated answer is appropriate	
21. Inverse operations	Understand the inverse relationship between addition and subtraction and how this relates to the part-whole structure; Know that they can perform two different subtractions as the inverse to an addition, due to addition's commutative property, but there is only one possible addition as the inverse to a subtraction.	
22. Make decisions	Apply strategies from this block in a range of contexts, choosing the	
Vocab	National Curriculum Objectives	
Addition, subtraction, mental method, column method, exchange, estimate, approximate/ly, digit.	- Add and subtract numbers mentally, including: a three-digit number and ones; a three digit number and tens, a three digit number and hundreds. - Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. - Estimate the answer to a calculation and use inverse operations to check answers. - Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	

Farsley Westroyd: Maths Knowledge within Small Steps

Number: Multiplication and Division A		Year 3 – Autumn Block 3
Step	Knowledge	
1. Multiplication (equal groups)	Y2 consolidation.	
2. Use arrays	Understand the link between repeated addition and multiplication and explore commutativity	
3. Multiples of 2	Y2 consolidation – Know that multiples of 2 are numbers that can be divided into two equal groups.	
4. Multiples of 5 and 10	Know that a whole number is a multiple of 5 if the ones digit is either 5 or 0 and that a whole number is a multiple of 10 if the ones digit is 0	
5. Sharing and grouping	Y2 consolidation.	
6. Multiply by 3	Recognise the link between counting in 3s, repeated addition and multiplication.	
7. Divide by 3	Know that dividing by 3 means sharing into 3 equal groups or grouping into 3s.	
8. The 3 times table	Understand the structure of the 3x table and derive unknown facts from known facts.	
9. Multiply by 4	Know that multiplying by 4 is the same as doubling and doubling again.	
10. Divide by 4	Know that dividing by 4 means sharing into 4 equal groups and grouping into 4s.	
11. The 4 times table	Understand the structure of the 4x table and derive unknown facts from known facts.	
12. Multiply by 8	Know how the 4 times table can help them multiply by 8 by doubling its Equivalent multiply of 4.	
13. Divide by 8	Know that dividing by 8 means sharing into 8 equal groups and grouping into 8s.	
14. The 8 times tables	Understand the structure of the 8x table and derive unknown facts from known facts.	
15. The 2-, 4- and 8-times tables	Know the connections between the 2, 4 and 8 times tables.	
Vocab	National Curriculum Objectives	
Equal, multiply, divide, times-table, sharing, grouping, array, bar model, remainder, repeated addition, multiplication sentence, division statement, division fact, partition.	- Count from 0 in multiples of 4, 8, 50 and 100. - Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. - Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two digit numbers times one digit numbers, using mental and progressing to formal written methods. - Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objectives.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Multiplication and Division B		Year 3 – Spring Block 1
Step	Knowledge	
1. Multiples of 10	Recognise that multiples of 10 end in a zero and use this fact to solve basic multiplication and division problems beyond the 10 times-table.	
2. Related calculations	Know that multiplication is commutative while division is not and use scaling facts by 10.	
3. Reasoning about multiplication	Understand the structure of multiplication.	
4. Multiply a 2-digit number by a 1-digit number (no exchange)	Know how to use short multiplication to multiply a 2-digit number by a 1-digit number (no exchange).	
5. Multiply a 2-digit number by a 1-digit number (with exchange)	Know how to use short multiplication to multiply a 2-digit number by a 1-digit number (with exchange).	
6. Link multiplication and division	Unitise in tens to explore what happens when a number within a calculation is multiplied by 10 and how this affects the answer	
7. Divide a 2-digit number by a 1-digit number (no exchange)	Know how to divide by partitioning into tens and ones and sharing into equal groups (no exchange).	
8. Divide a 2-digit number by a 1-digit number (flexible partitioning)	Know how to divide by partitioning into tens and ones and sharing into equal groups (with exchanges).	
9. Divide a 2-digit number by a 1-digit number (with remainders)	Know how to solve division calculations with remainders.	
10. Scaling	Know that scaling means how many times bigger or smaller an amount/object is.	
11. How many ways?	Know how to systematically list the possible combinations resulting from two groups of objects.	
Vocab	National Curriculum Objectives	
multiply ($\times$), divide ($\div$), multiplication fact, division fact, lots of, groups of, times-table, array, partition, bar model, part-whole model, remainder, commutative.	- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. - Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two digit numbers times one digit numbers, using mental and progressing to formal written methods. - Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objectives.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Length and Perimeter		Year 3 – Spring Block 2
Step	Knowledge	
1. Measure in metres and centimetres	Combine metres and centimetres to measure the length of objects.	
2. Measure in millimetres	Understand millimetres in relation to centimetres.	
3. Measure in centimetres and millimetres	Combine millimetres and centimetres to measure the length of objects.	
4. Metres, centimetres and millimetres	Know how many centimetres are in 1 m and how many millimetres are in 1 cm.	
5. Equivalent lengths m & cm	Know that 100cm is Equivalent to 1m.	
6. Equivalent lengths mm & cm	Know that 10mm is Equivalent to 1cm.	
7. Compare lengths	Know how to compare m, cm and mm, recognising Equivalents.	
8. Add lengths	Recognise that converting lengths to the same unit is a more efficient method to add lengths.	
9. Subtract lengths	Know how to use finding the difference to subtract lengths.	
10. What is perimeter?	Know that perimeter is the distance around the outside of a 2D shape.	
11. Measure perimeter	Find the perimeter of shapes on squared grids by counting along the edges.	
12. Calculate perimeter	Know that we calculate the perimeter of a 2D shape by adding all the lengths of the sides together.	
Vocab	National Curriculum Objectives	
Length, height, width, perimeter, distance, centimetre (cm), millimetre (mm), metre (m), unit of Measurement, measure, Equivalent, convert, greater than (>), less than (<), ruler, metre stick, Interval, scale	Measure, compare, add and subtract lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). Measure the perimeter of simple 2D shapes.	

Farsley Westroyd: Maths Knowledge within Small Steps

Number: Fractions A		Year 3 – Spring Block 3
Step	Knowledge	
1. Understand the denominators of unit fractions	Identify the role of the denominator, appreciating that this shows how many equal parts the whole has been divided into.	
2. Compare and order unit fractions	Understand that when the numerators are the same then the greater the denominator, the smaller the fraction.	
3. Understand the numerators of non-unit fractions	Understand that a non-unit fraction is made up of a quantity of unit fractions.	
4. Understand the whole	Know that when the numerator of a fraction is equal to its denominator, then the fraction is equivalent to 1 whole	
5. Compare and order non-unit fractions	Recognise that if the denominator is the same, then the greater the numerator, the greater the fraction or the smaller the numerator, the smaller the fraction..	
6. Fractions and scales	Determine how many equal parts a scale has been split into, and then what fraction is shown.	
7. Fractions on a number line	Identify how many equal parts a number line has been split into (intervals) and label each one with a fraction.	
8. Count in fractions on a number line	Count both forwards and backwards in fractions and label missing fractions on a number line.	
9. Equivalent fractions on a number line	Using number lines to find equivalent fractions by looking at fractions that are in line with each other (equal in value).	
10. Equivalent fractions as bar models	Use bar models to represent equivalent fractions	
Vocab	National Curriculum Objectives	
Denominator, numerator, unit fractions, non-unit fractions, scale, intervals, equivalent,	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Compare and order unit fractions, and fractions with the same denominators Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators Recognise and show, using diagrams, equivalent fractions with small denominators	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Mass and Capacity		Year 3 – Spring Block 4
Step	Knowledge	
1. Use scales-	Understand and use scales to read measurements.	
2. Measure mass in grams	Know how to read a range of scales to measure mass in grams, including scales with missing intervals.	
3. Measure mass in kilograms and grams-	Know how to read scales divided into sections to measure mass in both grams and kilograms.	
4. Equivalent masses (kilograms and grams)-	Know that 1 kg is equivalent to 1,000 g,	
5. Compare mass –	Understand that heavier objects are measured in kg and use this to compare mass.	
6. Add and subtract mass	Recognise the most efficient method for adding and subtracting masses.	
7. Measure capacity and volume in millilitres	Know how to use millilitres and standard scales to explore capacity.	
8. Measure capacity and volume in millilitres	Know how to use litres, millilitres and standard scales to explore capacity (mixing scales).	
9. Equivalent capacities and volumes (litres and millilitres)-	Know that 1l is equivalent to 1,000 ml,	
10. Compare capacity and volume –	Understand that litres are used for larger containers and use this knowledge to compare capacity.	
11. Add and subtract capacity and volume	Recognise the most efficient method for adding and subtracting	
Vocab	National Curriculum Objectives	
Mass, heavier than, lighter than, gram (g), hundreds, kilogram (kg), volume, millilitre (ml), litre (l).	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Fractions B		Year 3 – Summer Block 1
Step	Knowledge	
1. Add fractions	Know that the denominator shows how many equal parts the whole is divided into and that we add the numerators but not the denominators.	
2. Subtract fractions	Know that when subtracting fractions with the same denominator, we only subtract the numerators, and the denominator stays the same.	
3. Partition the whole	Know how to partition a whole into unit fractions and non-unit fractions.	
4. Unit fractions of a set of objects	Know how to find unit fractions of a set of objects using division facts.	
5. Non-unit fractions of a set of objects	Know that the denominator shows how many equal parts the whole is divided into, and the numerator shows how many parts of the whole there are.	
6. Reasoning with fractions of an amount	Use alternative methods to find fractions of an amount	
Vocab	National Curriculum Objectives	
Denominator, numerator, partition, unit fractions, nonunit fractions	- Add and subtract fractions with the same denominator within one whole - Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Money		Year 3 – Summer Block 2
Step	Knowledge	
1. Pounds and pence	Understand that money can be represented in different ways but still have the same value.	
2. Converting pounds and pence	Know that 100p is Equivalent to £1 and apply this knowledge to convert between pounds and pence.	
3. Adding money	Know that it is more efficient to add pounds, then pence, then convert when adding money.	
4. Subtracting money	Recognise different strategies, such as converting money or finding the difference, when subtracting money.	
5. Find change	Know how to use number lines and part-whole models to calculate change.	
Vocab	National Curriculum Objectives	
Convert, total, difference, pound (£), pence (p), coin, note, change	- Add and subtract amounts of money to give change, using both £ and p in practical contexts.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Time		Year 3 – Summer Block 3
Step	Knowledge	
1. Roman numerals to 12	Know the principles of the Roman number system and recognise and use Roman numerals on a clock face	
2. Telling the time to 5 minutes	– Know how to tell the time to the nearest 5 minutes on an analogue clock	
3. Telling the time to the minute	– Know how to tell the time to the nearest minute on an analogue clock	
4. Read time on a digital clock	– Understand the convention that we say “20 minutes to 4” to describe the time displayed on a digital clock as “3:40”, not “40 minutes past 3”	
5. Use an AM and PM	– Understand the language of ‘morning’, ‘afternoon’, ‘a.m.’ and ‘p.m.’ to describe the time of day	
6. Years, months and days	Know that there are 365 days in 1 year; Know that there are 12 months in 1 year; Know that a leap year occurs every 4 years and there are 366 days in a leap year; Know that there are 7 days in 1 week	
7. Days and hours	Remember that there are 24-hours in a day; Remember the days of the week; Recognise and use language like ‘midday’, ‘noon’ and ‘midnight’	
8. Hours and minutes	use start and end times- Find durations of time between given start and end times	
9. Hours and minutes- use durations	– Understand how to find the most efficient ways of breaking the time down in order to work out the duration.	
10. Minutes and seconds	Know that there are 60 seconds in 1 minute	
11. Units of time	Develop a realistic sense of how long it takes to complete a familiar task	
12. Solve problems with time	Find the most efficient way to solve problems involving time	
Vocab	National Curriculum Objectives	
Month, year, midnight, midday, am, pm, duration, estimate, consecutive, hour, minute, second, past, to, start, end, digital clock, analogue clock.	Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12 hour and 24- hour clocks. Estimate and read time with increasing accuracy to the nearest minute. Record and compare time in terms of seconds, minutes and hours. Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events [for example to calculate the time taken by particular events or tasks].	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Shape		Year 3 – Summer Block 4
Step	Knowledge	
1. Turns and angles	Recognise angles as a measure of a turn; Know how to make $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, and full turns from different starting points, both clockwise and anti-clockwise..	
2. Right angles in shapes	Recognise that a right angle is a quarter turn, 2 right angles make a halfturn, 3 right angles make three-quarters of a turn and 4 right angles make a complete turn	
3. Compare angles	Know that the word 'acute' describes an angle smaller than a right angle and the word 'obtuse' describes an angle bigger than a right angle	
4. Measure and draw accurately	Know how to draw straight lines accurately in cm and mm; Remember that we start from 0cm when using a ruler.	
5. Horizontal and vertical	Know that a horizontal line runs from left to right and a vertical line runs up and down.	
6. Parallel and perpendicular	Know that straight lines that meet at a right angle are called perpendicular and lines that never meet are called parallel	
7. Recognise and describe 2D shapes	Describe the properties of shapes, including types of angles, lines, symmetry and lengths of sides	
8. Draw polygons	Draw shapes accurately with a ruler when given the measurement for each length	
9. Recognise and describe 3D shapes	Describe shapes by identifying the number of faces, edges and vertices	
10. Make 3D shapes	Know how to construct cubes, cuboids, prisms, cylinders, pyramids, cones, spheres	
Vocab	National Curriculum Objectives	
right angle, acute, obtuse, parallel, perpendicular, vertical, horizontal, triangle, quadrilateral, kite, trapezium, rhombus, parallelogram, cuboid, triangular prism, square-based, pyramid, cone, cylinder, sphere, edge, face, vertices.	- Recognise angles as a property of shape or a description of a turn. - Identify right angles, recognise that two right angles make a half turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. - Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. - Draw 2 D shapes and make 3 D shapes using modelling materials. - Recognise 3 D shapes in different orientations and describe them.	

Farsley Westroyd: Maths Knowledge within Small Steps



Statistics		Year 3 – Summer Block 5
Step	Knowledge	
1. Interpret pictograms	Know the value of the symbol used in a pictogram and know what it means when half the symbol is used.	
2. Draw pictograms	Know how to present data both horizontally and vertically.	
3. Interpret bar charts	Know how to read and interpret bar charts with scales of 1, 2, 5 and 10.	
4. Draw bar charts	Know which scale will be the most appropriate when drawing their own bar charts	
5. Collect and represent data	Carry out data collection and represent the data as pictograms or bar charts	
6. Two-way tables	Interpret information from simple two-way tables.	
Vocab	National Curriculum Objectives	
Pictogram, key, bar chart, scale, table, row, column, vertical axis, horizontal axis.	- Interpret and present data using bar charts, pictograms and tables. - Solve one step and two step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	

Year 4

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Place Value		Year 4 – Autumn Block 1
Step	Knowledge	
1. Represent numbers to 1000	Y3 recap step.	
2. Partition numbers to 1000	Understand the value of hundreds, tens and ones digits in a number when partitioning; understand the purpose of a place holder zero (Y3 recap step)..	
3. Number line to 1000	Know the exact position of numbers to 1000 on a number line (Y3 recap step).	
4. Thousands	Know how to count in 1,000s, forwards and backwards, from any given multiple of 1,000; understand the composition of multiples of 1000, exploring how many hundreds they are made of.	
5. Represent numbers to 10,000	Understand the composition of numbers to 10,000; Understand the relationship between the different place value columns e.g. 100 is 10 times the size of 10 and a tenth the size of 1,000.	
6. Partition numbers to 10,000	Know how to partition numbers up to 10,000 into thousands, hundreds, tens and ones; know how to express their answers in numerals, words and expanded form.	
7. Flexible partitioning of numbers to 10,000	Know that numbers up to 10,000 can be partition in a number of different ways.	
8. Find 1, 10, 100 or 1000 more or less		
9. Number line to 10,000	label, identify and find missing values on blank or partially completed number lines (use real-life scales e.g. measuring jugs).	
10. Estimate on a number line to 10,000	Understand and discuss suitable estimates from the information given on the number line and the value of each interval, justifying their choices.	
11. Compare numbers to 10,000	Know how to compare numbers to 10,000 using key vocabulary and the inequality symbols.	
12. Order numbers to 10,000	Know how to order numbers to 10,000 using language such as 'smallest', 'greatest', 'ascending' and 'descending'.	
13. Roman numerals	Know that L represents 50 and C represents 100; understanding that the Roman system does not have a zero and does not use placeholders.	
14. Round to the nearest 10.		
15. Round to the nearest 100.		
16. Round to the nearest 1000.		
17. Round to the nearest 10, 100 or 1000		
Vocab	National Curriculum Objectives	
Tens, hundreds, thousands, rounding, order, more than (>), less than 0, less than (<), partition, numeral, nearest, distance, ascending, descending, rounding, negative, step, multiple, greater than (>), less than (<).	- Count in multiples of 6, 7, 9, 25 and 1000. - Find 1000 more or less than a given number. - Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones). - Order and compare numbers beyond 1000. - Identify, represent and estimate numbers using different representations. - Round any number to the nearest 10, 100 or 1000. - Solve number and practical problems that involve all of the above and with increasingly large positive numbers. - Count backwards through zero to include negative numbers.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Addition and Subtraction		Year 4 – Autumn Block 2
Step	Knowledge	
1. Add and subtract 1s, 10s, 100s and 1000s	Know how to add and subtract multiples of 1000 (mental focus).	
2. Add up to two 4-digit numbers – no exchange	Know how to use column addition to add 3- and 4-digit numbers with no exchanges	
3. Add two 4-digit numbers – one exchange	Know how to use column addition to add 3- and 4-digit numbers with one exchange.	
4. Add two 4-digit numbers – more than one exchange	Know how to use column addition to add 3- and 4-digit numbers with more than one exchange	
5. Subtract two 4-digit numbers – no exchange	Know how to use column subtraction to subtract 4-digit numbers with no exchanges.	
6. Subtract two 4-digit numbers – one exchange	Know how to use column subtraction to subtract 4-digit numbers with one exchange.	
7. Subtract two 4-digit numbers – more than one exchange	Know how to use column subtraction to subtract 4-digit numbers with more than one exchange	
8. Efficient subtraction	Know which methods are the most appropriate for a given calculation; know how to use constant difference to solve challenging calculations mentally.	
9. Estimate answers	Know how to use rounding to estimate answers; understand why estimation is important in real life.	
10. Checking Strategies	Understand how to use inverse operations to check addition and subtraction calculations	
Vocab	National Curriculum Objectives	
Addition, total, more than (>), subtraction, less than (<), column method, estimate, how much, strategy, efficient, accurate, exact, fact.	- Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. - Estimate and use inverse operations to check answers to a calculation. - Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Area		Year 4 – Autumn Block 3
Step	Knowledge	
1. What is area?	Know that area is the amount of space taken up by a 2-D shape or surface; understand that there are a range of ways to find the area of shapes or surfaces and evaluate which are the best (practical focus).	
2. Count squares	Know the strategy of counting the number of squares inside a shape to find its area	
3. Make shapes	Know that a rectilinear shape is a shape that has only straight sides and right angles; know that rectilinear shapes need to touch at the sides and not just at the corners.	
4. Compare areas	Compare the areas of rectilinear shapes where the same size square has been used.	
Vocab	National Curriculum Objectives	
Length, width, area, distance, rectangle, square, rectilinear shape, centimetre (cm), metre (m), kilometre (km), equivalent to	- Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. - Convert between different units of measure [for example, kilometre to metre].	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Multiplication and Division A		Year 4 – Autumn Block 4
Step	Knowledge	
1. Multiples of 3	Y3 recap step.	
2. Multiply and divide by 6 –	Know that the 6 times table is double the 3 times table	
3. 6 times table and division facts	Understand how to use known facts to times and divide by 6.	
4. Multiply and divide by 9 –	Recognise patterns to help them solve the 9 times table e.g. triple the 3 times table or subtract from the 10 times table.	
5. 9 times table and division facts	Understand how to use known facts to times and divide by 9.	
6. The 3,6- and 9-times tables –	Recognise links between the 3, 6 and 9 times-tables to deepen their understanding and embed fluency with these times-tables.	
7. Multiply and divide by 7	Understand how to use known facts to times and divide by 7.	
8. 7 times table and division facts.		
9. 11 times table and division facts –	Know that they can partition 11 into 10- and 1-times tables to find $\times 11$.	
10. 12 times table and division facts –	Know that they can partition 12 into 10- and 2-times tables to find $\times 12$.	
11. Multiply by 0 and 1	Know that when you multiply a number by 1, the result will always be the number itself; know that when you multiply a number by 0, the result will always be 0.	
12. Divide a number by 1 and itself –	Know that when you divide a number by 1 the answer will be itself and when dividing a number by itself the answer will be 1.	
13. Multiplying three numbers	Know that, when multiplying three numbers, we follow the associative law which means it does not matter how we group the numbers when we multiply them; understand how this links to commutativity and know how to change the order to make the calculation more efficient.	
Vocab	National Curriculum Objectives	
multiply ($\times$), divide ($\div$), multiplication fact, division fact, lots of, groups of, times-table, array, partition array, bar model, part-whole model, remainder, factor pair, factor, commutative.	Recall and use multiplication and division facts for multiplication tables up to 12×12. - Count in multiples of 6, 7, 9, 25 and 1000. - 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. - 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. - Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes. - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Multiplication and Division B		Year 4 – Spring Block 1
Step	Knowledge	
1. Factor pairs	Know that a factor is a whole number that multiplies by another number to make a product	
2. Use factor pairs	Identify which equivalent factor pair produces the easiest calculation to complete mentally	
3. Multiply by 10	- Recognise that when multiplying by 10 the digits move one place value column to the left and zero is needed as a placeholder in the now blank column	
4. Multiply by 100	Recognise that when multiplying whole numbers by 100, the digits move two place value columns to the left and zeros are needed as placeholders in the now blank columns.	
5. Divide by 10	Recognise that when dividing by 10, the digits move one place value column to the right	
6. Divide by 100	Realise that when dividing by 100, the digits move two place value columns to the right.	
7. Related facts	Multiplication and division- Explore scaling facts by 10 and 100	
8. Informal written methods for multiplication	Use a variety of informal written methods to multiply a 2-digit number by a 1-digit number including partitioning	
9. Multiply a 2-digit number by a 1-digit number	Remember how to use short multiplication to multiply a 2-digit number by a 1-digit number (with exchange).	
10. Multiply a 3-digit number by a 1-digit number	– Know how to use short multiplication to multiply a 3-digit number by a 1-digit number (carrying).	
11. Divide a 2-digit number by a 1-digit number (1)	– Know how to divide 2-digit numbers by 1-digit using the part-whole model (no remainders).	
12. Divide a 2-digit number by a 1-digit number (2)	Know how to divide 2-digit numbers by 1-digit (with remainders).	
13. Divide a 3-digit number by a 1-digit number	Know how to divide 3-digit numbers by 1-digit (with remainders).	
14. Correspondence problems	Use multiplication to work out the number of possible combinations of sets of items.	
15. Efficient multiplication	Know that there are different ways to multiply including partitioning.	
Vocab	National Curriculum Objectives	
Equal, multiply, divide, times-table, sharing, grouping, array, bar model, remainder, repeated addition, multiplication sentence, division statement, division fact, partition.	Recall and use multiplication and division facts for multiplication tables up to 12×12. - 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. - Recognise and use factor pairs and commutativity in mental calculations. - Multiply two digit and three digit numbers by a one digit number using formal written layout. - 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.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Multiplication and Division B		Year 4 – Spring Block 2
Step	Knowledge	
Measure in kilometres and metres	Know that kilometres are greater than metres and are used to measure greater distances.	
2. Equivalent lengths (kilometres and metres)	Know that 1km is equal to 1000m.	
3. Perimeter on a grid	Know that a rectilinear shape are shapes where all sides meet at a right angle.	
4. Perimeter of a rectangle	Understand that there are different ways to calculate the perimeter of rectangles e.g. adding all the sides, adding the length and width then multiplying by 2 or multiply the length and width by 2 then adding together.	
5. Perimeter of rectilinear shapes	Understand how to calculate the perimeter of rectilinear shapes, including finding missing sides.	
6. Find missing lengths in rectilinear shapes	Understand that the opposite sides of rectilinear shapes are related.	
7. Calculate perimeter of rectilinear shapes	Know how to work backwards from a given perimeter to work out an unknown side length.	
8. Perimeter of regular polygons	Know that in a regular polygon, all sides are equal in length and the angles are equal in size.	
9. Perimeter of polygon	Use symmetry and properties of shapes to find missing lengths before calculating the perimeter of a polygon.	
Vocab	National Curriculum Objectives	
Length, width, perimeter, distance, rectangle, square, rectilinear shape, centimetre (cm), metre (m), kilometre (km), Equivalent to.	- Find the area of rectilinear shapes by counting squares.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Fractions		Year 4 – Spring Block 3
Step	Knowledge	
1. Understand the whole –	Recap the part-whole relationship of fractions (Year 3)	
2. Count beyond 1	Know that fractions greater than 1 can be partitioned into parts and wholes.	
3. Partition a mixed number	Partition a mixed number into its whole and fractional parts.	
4. Number lines with mixed numbers -	Know how mixed numbers are represented on a number line	
5. Compare and order mixed numbers-	Recognising that the greater the whole number, the greater the mixed number (same denominator).	
6. Understand improper fractions-	Write mixed numbers as improper fractions.	
7. Convert mixed numbers to improper fractions		
8. Convert improper fractions to mixed numbers.		
9. Equivalent fractions on a number line –	Recognise equivalent fractions using number lines.	
10. Equivalent fraction families –	Understand how to find equivalent fractions using proportional reasoning	
11. Add 2 or more fractions	Remember that, when we add fractions, the denominator stays the same; Know that when we add two or more fractions and the answer is greater than one, then the total will be an improper fraction	
12. Add fractions and mixed numbers-	Add fractions and mixed numbers by a) partitioning the fraction to add to the next whole number, then adding the remaining fraction to the whole number, and b) adding the fractions separately, then adding the total to the whole number.	
13. Subtract 2 fractions -	Remember that, when we subtract fractions, the denominator stays the same.	
14. Subtract from whole amounts –	Know how many equal parts are equivalent to a whole e.g. $9/9 = 1$, $18/9 = 2$.	
15. Subtract from mixed numbers-	Subtract a whole or a fraction from a mixed number using bar models and number lines.	
Vocab	National Curriculum Objectives	
Tenths, hundredths, Equivalent, simplify, numerator, denominator, fraction, mixed number, improper fraction, simplest fraction, fraction of an amount, decimal point, Equivalent decimal, 0.1 and 0.01, decimal place.	Recognise and show, using diagrams, families of common Equivalent fractions. - Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. - 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 fractions with the same denominator..	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Decimals A		Year 4 – Spring Block 4
Step	Knowledge	
1. Tenths as fractions	Know that tenths arise when dividing 1 whole into 10 equal parts; Recognise that 10 tenths is a whole	
2. Tenths as decimals	Recognise the relationship between $\frac{1}{10}$ and 0.1	
3. Tenths on a place value chart	Know that tenths are to the right of the decimal point..	
4. Tenths on a number line	Know how to read and interpret tenths on a number line	
5. Divide a 1-digit number by 10	Understand that when dividing by 10 a number is split into 10 equal parts and is 10 times smaller; Know that importance of 0 as a place holder.	
6. Divide a 2-digit number by 10	Know how to divide a 2-digit number by 10 using a mental method.	
7. Hundredths as fractions	Know that hundredths arise when dividing 1 whole into 100 equal parts; Recognise that 10 hundredths is a tenth	
8. Hundredths as decimals	Recognise the relationship between $\frac{1}{100}$ and 0.01.	
9. Hundredths on a place value chart	Know that hundredths are to the right of the decimal point and tenths column.	
10. Divide a 1 or a 2-digit number by 100	Understand that when dividing by 100, the number is split into 100 equal parts and is 100 times smaller	
Vocab	National Curriculum Objectives	
Tenths, hundredths, Equivalent, simplify, numerator, denominator, fraction, mixed number, improper fraction, simplest fraction, fraction of an amount, decimal point, Equivalent decimal, 0.1 and 0.01, decimal place.	- 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 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths. - Solve simple measure and money problems involving fractions and decimals to two decimal places. - Convert between different units of measure [for example, kilometre to metre].	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Decimals B		Year 4 – Summer Block 1
Step	Knowledge	
1. Make a whole with tenths	Know how to make a whole using their understanding of tenths.	
2. Make a whole with hundredths	Know how to make a whole using their understanding of	
3. Hundredths		
4. Partition decimals	Understand the value of each digit with decimal numbers.	
5. Flexibly partition decimals	Know how to partition numbers in non-standard ways i.e. 0.12 can be made up of 12 hundredths and also 1 tenth and 2 hundredths	
6. Compare decimals	Know how to compare two numbers with two decimal places	
7. Order decimals	Know how to order numbers with two decimal places	
8. Round to the nearest whole number	Know how to round a number with one decimal place by looking at the digit in the tenths column.	
9. Halves and quarters as decimals	Know that $\frac{1}{2}$ is 0.5, $\frac{1}{4}$ is 0.25 and $\frac{3}{4}$ is 0.75	
Vocab	National Curriculum Objectives	
Tenths, hundredths, Equivalent, simplify, numerator, denominator, fraction, mixed number, improper fraction, simplest fraction, fraction of an amount, decimal point, Equivalent decimal, 0.1 and 0.01, decimal place.	- 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 $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$. - Find the effect of dividing a one- or two-digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Money		Year 4 – Summer Block 2
Step	Knowledge	
1. Write money using decimals	Understand pounds and pence and use decimal notations to represent this	
2. Convert between pounds and pence	Understand the difference in value i.e. between £0.80 and £0.08.	
3. Compare amounts of money	Compare two amounts in different formats and use this knowledge to order different amounts of money.	
4. Estimate with money	Know how to use rounding to round money which is written in decimal notation	
5. Calculate with money	Remember that 100p = £1 and use this knowledge to calculate the difference between two amounts.	
6. Solve problems with money	Know how to solve problems involving money, using their understanding of the four operations.	
Vocab	National Curriculum Objectives	
Convert, total, difference, pound (£), pence (p), coin, note, change.	- 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	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Time		Year 4 – Summer Block 3
Step	Knowledge	
1. Years, months, weeks and days	Know how to use their knowledge of four operations to convert between units of time.	
2. Hours, minutes and seconds	Know how to use their knowledge of four operations to convert between units of time.	
3. Convert between analogue and digital times	Know how to convert between analogue and digital using a 12-hour format	
4. Convert to the 24-hour clock	Know how to convert to digital clocks using 24- hour clock; know how to use am and pm to distinguish between morning and afternoon; Understand that digital time needs to be written in a four-digit format	
5. Convert from the 24-hour clock	Convert to 12-hour clock times and represent them on analogue clocks.	
Vocab	National Curriculum Objectives	
Convert, compare, unit of time, second, minute, hour, day, week, month, year, 12-hour, 24-hour, analogue, digital, am/pm.	- Read, write and convert time between analogue and digital 12- and 24-hour clocks. - Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Shape		Year 4 – Summer Block 4
Step	Knowledge	
Understand angles as turns	Year 3 recap.	
2. Identify angles	Know that an acute angle is more than 0 degrees and less than 90 degrees, a right angle is exactly 90 degrees, and an obtuse angle is more than 90 degrees but less than 180 degrees.	
3. Compare and order angles	Identify different types of angles, and use this information to compare and order the angles .	
4. Triangles	Know that an equilateral triangle is where all the sides and angles are equal, an 'isosceles' triangle is where two sides and angles are equal and a 'scalene' triangle is where all the sides and angles are different.	
5. Quadrilaterals	Know 'Quad' originates from Latin and means four and 'Lateral' originates from Latin and means sides; Know that a square, rectangle, rhombus, parallelogram, and trapezium are all quadrilaterals and describe and compare their properties.	
6. Polygons	- Know that "gon" means "angled" and the different prefixes relate to the number of angles; know the properties of regular and irregular polygons.	
7. Lines of symmetry	Identify any line of symmetry in any direction.	
8. Complete a symmetric figure	Use their knowledge of lines of symmetry to complete symmetric figures.	
Vocab	National Curriculum Objectives	
Rectangle, square, rectilinear shape, unit, triangle, quadrilateral, reflection, regular, irregular, interior angle, angle, acute, obtuse, right angle.	- 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 their properties and sizes. - Identify lines of symmetry in 2 D shapes presented in different orientations. - Complete a simple symmetric figure with respect to a specific line of symmetry.	

Farsley Westroyd: Maths Knowledge within Small Steps



Statistics		Year 4 – Summer Block 5
Step	Knowledge	
1. Interpret charts	Remember how to interpret data from pictograms, bar charts and tables; Know how to collect data and present this on a bar chart, asking and answering questions about the data they have collected.	
2. Comparison, sum and difference	Know how to solve comparison, sum and difference problems using discrete data with a range of scales.	
3. Interpret line graphs	Know that line graphs are used to present continuous data (time, temperature, height) but that these values are always changing; know how to solve comparison, sum and difference problems using continuous data with a range of scales.	
4. Draw line graphs	Draw line graphs to represent continuous data.	
Vocab	National Curriculum Objectives	
Rectangle, square, rectilinear shape, unit, triangle, quadrilateral, reflection, regular, irregular, interior angle, angle, acute, obtuse, right angle.	- 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 their properties and sizes. - Identify lines of symmetry in 2 D shapes presented in different orientations. - Complete a simple symmetric figure with respect to a specific line of symmetry.	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Position and Direction of Shapes		Year 4 – Summer Block 6
Step	Knowledge	
1. Describe position using coordinates	Know how to describe positions in the first quadrant.	
2. Plot coordinates	Know how to plot points in the first quadrant; Know how to read, write and use pairs of coordinates.	
3. Draw 2-D shapes on a grid	Use their knowledge of coordinates and properties of shapes to draw shapes with different properties.	
4. Translate on a grid	– Know that translating is when we move an object on the plane (only its position changes, not its size or orientation); Know how to move shapes and points on a coordinate grid following specific directions using language such as: left/right and up/down .	
5. Describe translation on a grid	Know how to describe the movement of shapes and points on a coordinate grid using specific language such as: left/right and up/down.	
Vocab	National Curriculum Objectives	
Reflection, position, horizontal, vertical, up, down, left, right, coordinates, square, rectangle, plot, vertex, vertices, point grid.	- Describe positions on a 2 D grid as coordinates in the first quadrant. - Plot specified points and draw sides to complete a given polygon. - Describe movements between positions as translations of a given unit to the left/ right and up/ down.	

Year 5

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Place Value		Year 4 – Autumn Block 1
Step	Knowledge	
1. Roman numerals to 1000	Know that D represents 500 and M represents 1000; recognise years written in Roman numerals (write this under date on the board every day to reinforce).	
2. Numbers to 10,000	Y4 recap step.	
3. Numbers to 100,000 –	Recognise the ten thousands column on a place value chart and understand the multiples of 10,000.	
4. Numbers to 1,000,000 –	Recognise that the pattern for thousands in a place value chart follows the same pattern as that of the ones: ones, tens, hundreds, (one) thousands, ten thousands, hundred thousands.	
5. Read and write numbers to 1,000,000		
6. Powers of 10 –	Understand the relationship between different numbers in different place value columns	
7. 10/100/1,000/10,000/100,000 more or less–	Know how to use powers of 10 to count forwards and backwards.	
8. Partition numbers to 1,000,000 –	Know how to partition any number to a million using the standard and flexible forms of partition.	
9. Number line to 1,000,000 -	Label, identify and find missing values on blank or partially completed number lines for numbers up to 1 million.	
10. Compare and order numbers to 100,000.		
11. Compare and order numbers to 1,000,000.		
12. Round to the nearest 10, 100 or 1000.		
13. Round within 100,000.		
14. Round within 1,000,000.		
Vocab	National Curriculum Objectives	
ones (1s), tens (10s), hundreds (100s), thousands (1,000s), ten thousands (10,000s), hundred thousands (100,000s), million (1,000,000), round, order, ascending, descending, less than (<), greater than (>), sequence.	- Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. - Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. - Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000. - Solve number problems and practical problems that involve all of the above. - Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Addition and Subtraction		Year 4 – Autumn Block 2
Step	Knowledge	
1. Mental strategies	Recap key mental strategies from previous years e.g. partitioning and finding the difference.	
2. Add whole numbers with more than four digits (column addition)		
3. Subtract whole numbers with more than four digits (column subtraction)		
4. Round to check answers	Know how rounding can supporting with estimating answers to addition and subtraction calculations.	
5. Inverse operations (addition and subtraction)	Know how to use inverse operations to find unknown numbers.	
6. Multi-step addition and subtraction problems	Know how to use the strategies from this block to solve problems with more than one step	
7. Compare calculations	Explore the structure of calculations to make comparisons; understand the effect that adding to or subtracting from numbers in a calculation has on the answer to that calculation.	
8. Find missing numbers	Understand that when two numbers are increased by the same amount the difference remains the same, and that the total of two numbers remains the same if one number has been increased by an amount and the other decreased by the same amount.	
Vocab	National Curriculum Objectives	
Add, subtract, ones (1s), tens (10s) hundreds (100s), thousands (1,000s), ten thousands (10,000s), mentally, inverse, round, estimate, sum.	- Add and subtract numbers mentally with increasingly large numbers. - Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). - Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. - Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Multiplication and Division A		Year 4 – Autumn Block 3
Step	Knowledge	
1. Multiples	Know that a multiple is the result of multiplying a number by a positive integer	
2. Common multiples	Know how to find the common multiples of any pair of numbers.	
3. Factors	Recognise factors of numbers; know that 1 is a factor of all numbers; know that every number is a factor and multiple of itself	
4. Common factors	Know that common factors are factors shared by 2 or more numbers.	
5. Prime numbers	Know that a prime number is a number with only two factors – 1 and itself; Know that numbers with more than two factors are called composite numbers	
6. Square numbers	Know that a square number is the result of multiplying a number by itself	
7. Cube numbers	Know that a cube is the result of multiplying a number by itself then by itself again.	
8. Multiply by 10, 100 and 1000	Know that when we multiply by 1000, the digits move 3 places to the left	
9. Divide by 10, 100 and 1000	know that when we divide by 1000, the digits move 3 places to the right.	
10. Multiples of 10, 100 and 1000	Understand how to use factors to solve calculations involving multiples of 10, 100 and 1000.	
Vocab	National Curriculum Objectives	
prime number, composite number, square number, cube number, square (2), cube (3), inverse operation, multiply, divide, multiple, factor, prime factor.	- Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers. - Know and use the vocabulary of prime numbers, prime factors and composite (non prime) numbers. - Establish whether a number up to 100 is prime and recall prime numbers up to 19. - Multiply and divide numbers mentally, drawing upon known facts. - Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000. - Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³). - Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes. - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	

Farsley Westroyd: Maths Knowledge within Small Steps

Number: Multiplication and Division A		Year 4 – Autumn Block 4
Step	Knowledge	
1. Find fractions Equivalent to a unit fraction –	Know how unit fractions can be expressed in other forms.	
2. Find fractions Equivalent to a non-unit fraction.		
3. Recognise Equivalent fractions –	Know that there are a range of ways to find Equivalent fractions such as using their knowledge of factors and multiples and looking at the multiplicative relationship between the numerator and denominator	
4. Convert improper fractions to mixed numbers	Remember that an improper fraction is one where the numerator is greater than or equal to the denominator and a mixed number consists of an integer and a proper fraction.	
5. Convert mixed numbers to improper fractions –	Know how to convert mixed numbers to improper fractions using their understanding of parts and the whole.	
6. Compare fractions less than 1	Know how to compare fractions where the denominators are the same or where one denominator is a multiple of the other.	
7. Order fractions less than 1	Know how to order a set of three or more fractions.	
8. Compare and order fractions greater than 1 –	Understand that if the number of wholes is different, they do not need to compare the fractional parts. When the number of wholes is equal, they compare denominators or numerators of the fractional parts.	
9. Add and subtract fractions with the same denominator –	Remember that when the denominators are the same, they only need to add or subtract the numerators.	
10. Add fractions within 1		
11. Add fractions with total greater than 1.		
12. Add to a mixed number	Know that they can partition a mixed number to add the fractional amounts first.	
13. Add two mixed numbers –	Understand that, when adding mixed numbers, we can partition the wholes and fractions to add them separately or convert them to improper fractions.	
14. Subtract fractions.		
15. Subtract from a mixed number –	Know that they can either a whole number part or a fractional part from a mixed number.	
16. Subtract from a mixed number – breaking the whole.		
17. Subtract two mixed numbers.		
Vocab	National Curriculum Objectives	
Equivalent, numerator, denominator, whole, fraction, simplify, division, mixed number, convert, sequence, proper fraction, improper fraction, convert, common denominator, fraction of an amount.	- Compare and order fractions whose denominators are multiples of the same number. - Identify, name and write Equivalent fractions of a given fraction, represented visually including tenths and hundredths. - Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example $\frac{3}{4} + \frac{4}{4} = \frac{7}{4} = 1\frac{3}{4}$]. - Add and subtract fractions with the same denominator and denominators that are multiples of the same number. - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. - Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	

Farsley Westroyd: Maths Knowledge within Small Steps

Number: Multiplication and Division A		Year 5 – Spring Block 1
Step	Knowledge	
1. Multiply up to a 4-digit number by a 1-digit number	Know how to multiply 4-digits by 1-digit using short multiplication.	
2. Multiply a 2-digit number by a 2-digit number (area model)	Know how to multiply two 2-digit numbers using the grid method.	
3. Multiply a 2-digit number by a 2-digit number	Know how to use the formal written method of long multiplication to multiply two 2-digit numbers together.	
4. Multiply a 3-digit number by a 2-digit number	Know how to use the formal written method of long multiplication to multiply 3-digit numbers by 2-digit numbers	
5. Multiply a 4-digit number by a 2-digit number	Know how to use the formal written method of long multiplication to multiply 4-digit numbers by 2-digit numbers.	
6. Solve problems with multiplication	Use a variety of methods to solve multiplication problems and discuss which is the most efficient.	
7. Short division	Know the formal written method of short division	
8. Divide a 4-digit number by a 1-digit number	Know how to use short division to divide 4-digit numbers by a 1-digit number.	
9. Divide with remainders	Understand how to interpret remainders when using short division; Know that they can express remainders as fractions, decimals or that they may need to round up or down, depending on the context.	
10. Efficient division	Recognise the most efficient or appropriate methods to use in a range of contexts.	
11. Solve problems with multiplication and division	Use a variety of methods to solve multiplication and division problems and discuss which is the most efficient.	
Vocab	National Curriculum Objectives	
Equal, multiply, divide, times-table, sharing, grouping, array, bar model, remainder, repeated addition, multiplication sentence, division statement, division fact, partition, place holder	- Multiply and divide numbers mentally drawing upon known facts. - Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. - Divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for the context. - Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Multiplication and Division A		Year 5 – Spring Block 2
Step	Knowledge	
1. Multiply a unit fraction by an integer	Know that the numerator is multiplied by the integer and the denominator stays the same (until simplified).	
2. Multiply a non-unit fraction by an integer	Know that the numerator is multiplied by the integer and the denominator stays the same (until simplified).	
3. Multiply a mixed number by an integer	Understand that there are different ways to multiply a mixed number by an integer and explore the most efficient method to do this e.g. partitioning, converting to an improper fraction first.	
4. Calculate a fraction of a quantity- (sharing in equal groups). 5. Fraction of an amount	Remember that we divide by the denominator and multiply by the numerator when finding fractions of amounts.	
6. Find the whole	Use a fraction of an amount to find the whole.	
7. Using fractions as operators	Recognise the connection between finding a fraction of an amount and multiplying a fraction by an integer.	
Throughout this block, it is essential that children understand that the x symbol could be replaced with of and it would mean the same thing; therefore, sometimes it might be easier to switch them around.		
Vocab	National Curriculum Objectives	
Equivalent, numerator, denominator, whole, fraction, simplify, division, mixed number, convert, sequence, proper fraction, improper fraction, convert, common denominator, fraction of an amount	- Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example $\frac{3}{5} + \frac{4}{5} = \frac{7}{5} = 1\frac{2}{5}$]. - Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. - Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.	

Farsley Westroyd: Maths Knowledge within Small Steps

Number: Decimals and Percentages		Year 5 – Spring Block 3
Step	Knowledge	
1. Decimals up to 2 decimal places	Understand the value of numbers with two decimal places.	
2. Equivalent fractions and decimals (tenths)	Understand the link between decimals and fractions.	
3. Equivalent fractions and decimals (hundredths)	Understand the link between decimals and fractions.	
4. Equivalent fractions and decimals	Know how to convert between fractions and decimals with numbers greater than 1.	
5. Thousandths as fractions	– Know that thousandths are to the right of the decimal point, tenths column and hundredths column	
6. Thousands as decimals	Know how to represent thousandths as decimals.	
7. Thousandths on a place value chart	Know how to represent thousandths on a place value chart.	
8. Order and compare decimals (same number of decimal places)		
9. Order and compare any decimals with up to 3 decimal places.		
10. Round to the nearest whole number	Remember that to round a number to the nearest whole number, they need to look at the digit in the tenths column	
11. Round to 1 decimal place	Know that to round a number to the nearest tenth, they need to look at the digit in the hundredths column.	
12. Understand percentages	Understand that 'per cent' relates to the 'number of parts per hundred'; Recognise the symbol % is used to represent this definition.	
13. Percentages as fractions	Know how to represent percentages as fractions using the denominator 100.	
14. Percentages as decimals	Find decimal equivalents to percentages.	
15. Equivalent F.D.P	Remember that $\frac{1}{2} = 0.5$, $\frac{1}{4} = 0.25$, $\frac{3}{4} = 0.75$; Know that $\frac{1}{5} = 0.2$, $\frac{2}{5} = 0.4$, $\frac{3}{5} = 0.6$ and $\frac{4}{5} = 0.8$; Know how to find Equivalent FDP when the denominator is 10, 20 or 25.	
Vocab	National Curriculum Objectives	
decimal place, tenth, hundredth, thousandth, decimal point, place value, digit, fraction, per cent (%), percentage, one decimal place, two decimal places.	Read, write, order and compare numbers with up to three decimal places. - Recognise and use thousandths and relate them to tenths, hundredths and decimal Equivalents. - Round decimals with two decimal places to the nearest whole number and to one decimal place. - Solve problems involving number up to three decimal places. - Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. - Solve problems which require knowing percentage and decimal Equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	

Farsley Westroyd: Maths Knowledge within Small Steps

Measurement: Area and Perimeter		Year 5 – Spring Block 4
Step	Knowledge	
1. Perimeter of rectangles –	Know different methods of finding the perimeter, for example adding all four sides separately, adding the length to the width and then doubling, or doubling the length and the width and then adding the results	
2. Perimeter of rectilinear shapes	Know how to calculate the perimeter of shapes with unknown side lengths; Know that it is useful to cross off sides when calculating the perimeter of rectilinear shapes.	
3. Perimeter of polygons	Use their knowledge of regular shapes to find the perimeter by multiplying by the number of sides.	
4. Area of a rectangle –	Know that the formula to calculate the area of a rectangle is length multiplied by width.	
5. Area of compound shapes	Understand that they can use their knowledge of rectangles to calculate the area of compound shapes (please explore both splitting the shape, and also finding the whole rectangles area and taking the missing part off).	
6. Estimate area –	Understand how to use their knowledge of counting squares (Y4) and fractions to estimate the area of irregular shapes.	
Vocab	National Curriculum Objectives	
Perimeter, distance, area, space, length, width, centimetre, square centimetre (cm ²), metre square metre (m ²), scale, compare, estimate.	- Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. - Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes.	

Farsley Westroyd: Maths Knowledge within Small Steps



Statistics		Year 5 – Spring Block 5
Step	Knowledge	
1. Draw line graphs		
2. Read and interpret line graphs	Know how to solve comparison, sum and difference problems in relation to line graphs.	
3. Read and interpret tables		
4. Two-way tables	Know how to interpret information from tables which contain two sets of data.	
5. Read and interpret timetables	Know how to extract information from timetables and solve problems relating to time.	
Vocab	National Curriculum Objectives	
Graph, line graph, table, horizontal, vertical, two-way table, scale, axis/axes, data, plot/plotted, tallies/tally, digits.	- Solve comparison, sum and difference problems using information presented in a line graph. - Complete, read and interpret information in tables including timetables.	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Shape		Year 5 – Summer Block 1
Step	Knowledge	
1. Understand and use degrees	Know that degrees is a unit of measure for turn; know the degree symbol; know that a full turn as 360 degrees, a half-turn as 180 degrees and a quarter-turn (or right angle) as 90 degrees;	
2. Classify angles	Know how to visually classify an angle as acute, obtuse or reflex by comparing them to right angles and straight lines	
3. Estimate angles	Understand the idea of halfway between already known angles, for example 45° is half of a right angle and 135° is halfway between a right angle and a straight line to estimate angles	
4. Measure angles up to 180°	Know how to use a protractor to measure acute and obtuse angles	
5. Drawing lines and angles accurately		
6. Calculating angles around a point	Know that angles round a point total 360 degrees	
7. Calculating angles on a straight line	Know that angles on a straight line total 180 degrees	
8. Lengths and angles in shapes	Know how to use square grids to reason about lengths and angles	
9. Regular and irregular polygons	Know that 'regular' means all sides and angles are equal	
10. 3D shapes	Identify 3D shapes from 2D representations	
Vocab	National Curriculum Objectives	
Angle, whole turn, right angle, acute angle, obtuse angle, reflex angle, degree ($^\circ$), interior angle, clockwise, anticlockwise, orientation, parallel, perpendicular, right angle, interior angle, quadrilateral, regular, irregular, 3D shape, pyramid, sphere, cone, hexagon, pentagon, triangle.	- Identify 3D shapes, including cubes and other cuboids, from 2D representations. - Use the properties of rectangles to deduce related facts and find missing lengths and angles. - Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. - Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. - Draw given angles, and measure them in degrees. - Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) other multiples of 90	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Position and Direction		Year 5 – Summer Block 2
Step	Knowledge	
1. Read and plot coordinates (in the first quadrant)	Understand that the coordinates (0,0) is called the origin; Know that the first number represents the x-axis and the second number represents the y-axis; Know that coordinates are fixed and cannot be moved.	
2. Problem solving with coordinates	Use the given coordinates to work out any missing coordinates	
3. Translation	Know how to translate shapes on a grid; Remember that translation means to move an object, but its size and orientation stays the same.	
4. Translation with coordinates	Know how to translation coordinates, describe their position and describe the translation.	
5. Lines of symmetry	Explore shapes with multiple lines of symmetry in different orientations	
6. Reflection in horizontal and vertical lines	Know how to reflect shapes on a coordinates grids; Know what happens to coordinates when reflected	
Vocab	National Curriculum Objectives	
Reflection, translation, vertex, vertices, coordinates, mirror line, horizontal axis, vertical axis, quadrant.	- Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	

Farsley Westroyd: Maths Knowledge within Small Steps

Number: Decimals		Year 5 – Summer Block 3
Step	Knowledge	
1. Use known facts to add and subtract decimals within 1		
2. Complements to 1	Recognise the links between complements to 1 and number bonds to 10, 100 and 1000	
3. Add and subtract decimals across 1	Understand how to use flexible partitioning when a decimal number crosses the whole.	
4. Add decimals with the same number of decimal places	Know how to use column addition to add numbers with decimal places.	
5. Subtract decimals with the same number of decimal places	Know how to use column subtraction to subtract numbers with decimal places.	
6. Add decimals with different numbers of decimal places	Know how to use column addition to add numbers with a different number of decimal places.	
7. Subtract decimals with different numbers of decimal places	Know how to use column subtract to subtract numbers with a different number of decimal places.	
8. Efficient strategies for adding and subtracting decimals	Recognise the most efficient method to add and subtract decimals and decimals and whole numbers.	
9. Decimal sequences –	Recognise patterns in decimal sequences; Understand that the next part of the sequence is called a 'term'.	
10. Multiply decimals by 10, 100 and 1000		
11. Divide decimals by 10, 100 and 1,000		
12. Multiply and divide decimals-missing values	Recognise the inverse relationship between multiplying and dividing by 10, 100 and 1,000 and use this to find the missing values.	
Vocab	National Curriculum Objectives	
Decimal place, tenth, hundredth, thousandth, decimal point, place value, digit, fraction, per cent (%), percentage, one decimal place, two decimal places.	- Solve problems involving number up to three decimal places. - Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. - Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Negative Numbers		Year 5 – Summer Block 4
Step	Knowledge	
1. Understand negative numbers	Explore negative numbers in real-life contexts, including temperatures, distances above and below sea level and floors in a building that go underground.	
2. Count through zero in 1s	Count both forwards and backwards through zero on a number line.	
3. Count through zero in multiples	Count both forwards and backwards through zero on a number line.	
4. Compare and order negative numbers	Compare and order integers that include negative numbers.	
5. Find the difference	Contextual problems, such as finding the difference between temperatures or distances above and below ground.	
Vocab	National Curriculum Objectives	
Decimal place, tenth, hundredth, thousandth, decimal point, place value, digit, fraction, per cent (%), percentage, one decimal place, two decimal places.	- Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. - Solve number problems and practical problems that involve all of the above.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Converting Units		Year 5 – Summer Block 5
Step	Knowledge	
1. Kilograms and kilometres	Know how to convert between g and kg; Know that 'kilo' means a thousand.	
2. Milligrams and millilitres	Know that milli means 1/1000; Know how to convert between ml and l and mm and m.	
3. Convert units of length	Know how to convert between different units of metric measure.	
4. Convert between metric and imperial units	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds (lbs) and pints.	
5. Convert units of time	Know how to convert between different units of time including years, months, weeks, days, hours, minutes and seconds.	
6. Calculate with timetables	Know how to use a number line to solve problems relating to time.	
Vocab	National Curriculum Objectives	
Convert, metric unit, imperial unit, kilo, kilogram, gram, millimetre, centimetre, metre, kilometre, litre, millilitre, pound (lb), ounce (oz), inch (in), foot (ft), yard (yd), pint, gallon, stone (st), approximately.	- Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml]. - Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. - Solve problems involving converting between units of time. Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes. - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Volume		Year 5 – Summer Block 6
Step	Knowledge	
1. Cubic centimetres	Know that volume is the amount of three-dimensional space an object takes up; recognise that some of the cubes in a pictorial representation cannot be seen	
2. Compare volume	Know how to compare the volume of shapes by counting cubes	
3. Estimate volume	Know how to estimate volume and capacity of different solids and objects	
4. Estimate capacity	Understand that we often use the word capacity when referring to liquid	
Vocab	National Curriculum Objectives	
Volume, solid, capacity, calculate, estimate, cube.	- Estimate volume [for example using 1cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]. - Use all four operations to solve problems involving measure.	

Year 6

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Place Value		Year 6 – Autumn Block 1
Step	Knowledge	
1. Numbers to 1,000,000	Y5 recap step.	
2. Numbers to 10,000,000	Understand the place value of all numbers to 10,000,000.	
3. Read and write numbers to 10,000,000	Know the structure of how numbers to 10,000,000 are said and written.	
4. Powers of 10	Identify integers that are 10, 100, 1,000 times the size, or one tenth, one-hundredth, one thousandth the size of other integers.	
5. Number line to 10,000,000	Label, identify and find missing values on blank or partially completed number lines for numbers up to 10 million.	
6. Compare and order any integers	Know how to compare and order integers to 10 million.	
7. Round any integer	Know how to round to the nearest million.	
8. Negative numbers	Understand how negative numbers are used in real life contexts.	
Vocab	National Curriculum Objectives	
ones (1s), tens (10s), hundreds (100s), thousands (1,000s), ten thousands (10,000s), hundred thousands (100,000s), million (1,000,000), ten million (10,000,000), round, order, ascending, descending, less than (<), greater than (>), sequence, positive, negative.	- Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. - Round any whole number to a required degree of accuracy. - Use negative numbers in context, and calculate intervals across zero. - Solve number and practical problems that involve all of the above.	

Farsley Westroyd: Maths Knowledge within Small Steps

Number: Four Operations (Addition, Subtraction, Multiplication and Division)		Year 6 – Autumn Block 2
Step	Knowledge	
1. Add and subtract integers		
2. Common factors	Identify the highest common factor of any given numbers.	
3. Common multiples	Identify the lowest common multiple of any given numbers	
4. Rules of divisibility	Know that a number is divisible by 2, 5 or 10 by looking at the ones digit; know that a number is divisible by 4 if halving the number leaves an even number and link this to the corresponding rule for 8; know that a number is divisible by 3 if the sum of the digits is divisible by 3 and divisible by 9 if the sum of the digits is divisible by 9; know that to be divisible by 6 the number has to be divisible by 2 and 3; know that a 2-digit number is divisible by 11 if the digits are the same.	
5. Primes to 100	Identify all the prime numbers to 100 and recall the primes to 19; Know how to identify the prime factors of a given number.	
6. Square and cube numbers	– Remember the notations for squared and cubed numbers; know that a square of cube number is the result of the multiplication.	
7. Multiply up to a 4-digit number by a 2-digit number	Know how to use the formal written method for long multiplication	
8. Solve problems with multiplication	Know how to use a range of multiplication strategies to solve problems.	
9. Short division	Y5 recap step	
10. Division using factors	Find factor pairs of 2-digit numbers.	
11. Introduction to long division	Know how to use the formal written method of long division to divide 3- and 4- digit numbers by 2-digit numbers (no remainders).	
12. Long division with remainders	Know how to use the formal written method of long division to divide 3- and 4- digit numbers by 2-digit numbers (remainders).	
13. Solve problems with division	Understand how to interpret remainders in context.	
14. Solve multi-step problems		
15. Order of operations	Know the order of priority for operations in a calculation: that calculations in brackets should always be done first, and that multiplication and division have equal priority and should be performed before additions and subtractions.	
16. Mental calculations and estimation	Know that estimations are a 'sense-check' before or after the calculation and should be done mentally.	
17. Reason from known facts	Know how to work out other facts from a given fact using their knowledge of place value, inverse operations, commutativity and the mental strategies.	
Vocab	National Curriculum Objectives	
column addition, column subtraction, estimate, multiplication, short division, long division, remainder, factor, estimate, common factor, common multiple, prime, composite, squared (2), cubed (3), order of operations, brackets, inverse operation. (1,000,000), ten million (10,000,000), round, order, ascending, descending, less than (<), greater than (>), sequence, positive, negative.	Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. - Multiply multi digit number up to 4 digits by a 2 digit number using the formal written method of long multiplication. - Divide numbers up to 4 digits by a 2 digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context. - Divide numbers up to 4 digits by a 2 digit number using the formal written method of short division, interpreting remainders according to the context. - Perform mental calculations, including with mixed operations and large numbers. - Identify common factors, common multiples and prime numbers. - Use their knowledge of the order of operations to carry out calculations involving the four operations. - Solve problems involving addition, subtraction, multiplication and division. - Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Fractions A		Year 6 – Autumn Block 3
Step	Knowledge	
1. Equivalent fractions and simplifying	Recognise when fractions are, and are not, in their simplest form using knowledge of Equivalent fractions; know that when the numerator and denominator have no common factors greater than 1, the fraction is in its simplest form.	
2. Equivalent fractions on a number line	Know how to use number lines to count forwards and backwards in fractions and to find Equivalent fractions.	
3. Compare and order (denominator)	Know that when the denominators are the same, the bigger the numerator, the bigger the fraction or the smaller the numerator, the smaller the fraction.	
4. Compare and order (numerator)	Know that when the numerators are the same, the bigger the denominator, the smaller the fraction, or the smaller the denominator the bigger the fraction.	
5. Add and subtract simple fractions		
6. Add and subtract any two fractions.		
7. Add mixed numbers		
8. Subtract mixed numbers		
9. Multi-step problem		
Vocab	National Curriculum Objectives	
Equivalent, numerator, denominator, whole, fraction, simplify, division, mixed number, convert, sequence, proper fraction, improper fraction, convert, common denominator, fraction of an amount.	- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. - Compare and order fractions, including fractions > 1. - Add and subtract fractions with different denominators and mixed numbers, using the concept of Equivalent fractions. - Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $1/4 \times 1/2 = 1/8$). - Divide proper fractions by whole numbers (e.g. $1/3 \div 2 = 1/6$)	

Farsley Westroyd: Maths Knowledge within Small Steps

Number: Fractions A		Year 6 – Autumn Block 4
Step	Knowledge	
1. Multiply fractions by integers	Know how to multiply mixed numbers by integers.	
2. Multiply fractions by fractions	Know how to use number lines to count forwards and backwards in fractions and to find Equivalent fractions. Know that they should multiply the numerators by each other and the denominators by each other.	
3. Divide a fraction by an integer	Know how to divide fractions by integers when the numerator is a multiple of the integer they are dividing by.	
4. Divide any fraction by an integer	Know that you multiply the integer by the denominator and keep the numerator the same.	
5. Mixed questions with fractions		
6. Fraction of an amount	Understand that the denominator is the number of parts the whole is divided into, and the numerator represents the number of those parts that are selected.	
7. Fraction of an amount	Find the whole- Understand why we multiply the given amount by the denominator to find a unit fraction from a given non-unit fraction and use this to find the whole.	
Vocab	National Curriculum Objectives	
Equivalent, numerator, denominator, whole, fraction, simplify, division, mixed number, convert, sequence, proper fraction, improper fraction, convert, common denominator, fraction of an amount.	- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. - Compare and order fractions, including fractions > 1. - Add and subtract fractions with different denominators and mixed numbers, using the concept of Equivalent fractions. - Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $1/4 \times 1/2 = 1/8$). - Divide proper fractions by whole numbers (e.g. $1/3 \div 2 = 1/6$)	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Converting Units		Year 6 – Autumn Block 5
Step	Knowledge	
1. Metric measures	Recognise, read and write all metric measures for length, mass and capacity; Know that tonnes are a way of measuring mass and that 1000kg is equal to 1 tonne.	
2. Convert metric measures	Remember how to convert between metric measures for length and mass; know how to convert between metric measures for capacity.	
3. Calculate with metric measures		
4. Miles and kilometres	Know that 5 miles is roughly Equivalent to 8km; know that 1 mile is greater than 1km	
5. Imperial measures	Know 1 inch is roughly Equivalent to 2.5cm; 1 foot = 12 inches; 1 pound = 16 ounces; 1 stone = 14 pounds; 1 gallon = 8pints.	
Vocab	National Curriculum Objectives	
Convert, metric unit, imperial unit, kilo, kilogram, gram, millimetre, centimetre, metre, kilometre, litre, millilitre, pound (lb), ounce (oz), inch (in), foot (ft), yard (yd), pint, gallon, stone (st), approximately.	- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. - Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 d.p - Convert between miles and kilometres.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Ratio		Year 6 – Spring Block 1
Step	Knowledge	
1. Add or multiply?	Know that the relationship between two numbers can be expressed additively or multiplicatively	
2. Use ratio language	Understand that a ratio shows the relationship between two values and can describe how one is related to another.	
3. Introduction to the ratio symbol	Recognise the colon notation as the ratio symbol, and continue to link this with the language ‘for every...there are...’	
4. Ratio and fractions	Understand the relationship between fractions and ratio.	
5. Scale drawing	Use the language of “Each square represents ...” to explain the relationship between the original image and its scale drawing.	
6. Use scale factors	Know that scale factor refers to the process of making objects bigger or smaller.	
7. Similar shapes	Know that ‘similar’ in maths means that one shape is an exact enlargement of the other, not just they have some common properties.	
8. Ratio problems	Recognise that when they multiply or divide from one amount to another, they do the same for the other value to keep the ratios equivalent	
9. Proportion problems	Know that both values need to be divided by the same amount to find 1, then both new values can be multiplied by the same amount to find any new value.	
10. Recipes	Multiply and divide quantities of ingredients, for example adjusting the quantities for 4 people to 5 people by dividing each ingredient by 4 and then multiplying by 5	
Vocab	National Curriculum Objectives	
Ratio, proportion, scale, scale factor, proportionality.	- Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. - Solve problems involving similar shapes where the scale factor is known or can be found. - Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Algebra		Year 6 – Spring Block 2
Step	Knowledge	
1. 1-step function machines	Know that one step equations have one operation after the input.	
2. 2-step function machines	Know that two step equations have two operations after the input.	
3. Form expressions	Know how to use simple algebraic expressions as inputs; Know that an expression expresses a mathematical operation but there is no output	
4. Substitution	Know that substitution is where we replace numbers with letters or symbols; Know how to substitute into simple expressions to find a particular value.	
5. Formulae	Know how to substitute into simple formulae.	
6. Form equations	Understand the difference between an expression and an equation.	
7. Solve one step equations		
8. Solve two step equations		
9. Find pairs of values	Know how to use substitution to consider what possible values a pair of variables can take.	
10. Solve problems with two unknowns	Know how to solve problems with two unknowns when more than one piece of information is given, so there is only one possible solution.	
Vocab	National Curriculum Objectives	
Sequence, rule, term, algebra, expression, calculation, formula, substitute, generalise, operation, calculate, equation, inverse, solution.	- Use simple formulae. - Generate and describe linear number sequences. - Express missing number problems algebraically. - Find pairs of numbers that satisfy an equation with two unknowns. - Solve problems which require answers to be rounded to specified degrees of accuracy. - Enumerate possibilities of combinations of two variables.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Decimals		Year 6 – Spring Block 3
Step	Knowledge	
1. Place value within 1	Understand the value of all digits in numbers with three decimal places within 1.	
2. Place value-integers and decimals	Understand the value of all digits in numbers with three decimal places greater than 1.	
3. Round decimals	Round numbers with up to 3 decimal places to the nearest integer and tenth (1 decimal place), as well as rounding to the nearest hundredth (2 decimal places)	
4. Add and subtract decimals	Add and subtract numbers with different numbers of decimal places and numbers where exchanging between columns is needed.	
5. Multiply by 10, 100 and 1,000		
6. Divide by 10, 100 and 1,000		
7. Multiply decimals by integers	Know how to use short multiplication to multiply decimal numbers by integers.	
8. Divide decimals by Integers	Know how to use short division to divide decimal numbers by integers	
9. Multiply and divide decimals in context		
Vocab	National Curriculum Objectives	
Decimal place, tenth, hundredth, thousandth, decimal point, place value, digit, fraction, one decimal place, two decimal places.	- Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. - Multiply one digit numbers with up to 2 decimal places by whole numbers. - Use written division methods in cases where the answer has up to 2 decimal places.	

Farsley Westroyd: Maths Knowledge within Small Steps



Number: Fractions, Decimals and Percentages		Year 6 – Spring Block 4
Step	Knowledge	
1. Decimals and fraction equivalents	Know how to convert decimals to fractions; remember the common fractions, such as thirds, quarters, fifths and eighths, as decimals; know that finding equivalent fraction where the denominator is 10, 100 or 1,000 makes it easier to convert from a fraction to a decimal.	
2. Fractions as division	Know that fractions are simply division statements e.g. $\frac{3}{4}$ is $3 \div 4$ and use this knowledge to convert fractions to decimals.	
3. Understand percentages	Remember that 'per cent' means out of 100	
4. Fractions to percentages	Know how to convert fractions to Equivalent fractions where the denominator is 100 in order to find the percentage equivalent.	
5. Equivalent FD		
6. Order FDP		
7. Percentage of an amount -one step	Remember how to find 1%, 5%, 10% and 50%.	
8. Percentage of an amount -multi step	Know how to find any percentages of any amount.	
9. Percentages-missing values	Find the whole number from a given percentage	
Vocab	National Curriculum Objectives	
decimal place, tenth, hundredth, thousandth, decimal point, place value, digit, fraction, per cent (%), percentage, one decimal place, two decimal places.	- Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison. - Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.	

Farsley Westroyd: Maths Knowledge within Small Steps



Measurement: Perimeter, Area and Volume		Year 6 – Spring Block 5
Step	Knowledge	
1. Shapes same area	Know how to find and draw rectilinear shapes with the same area.	
2. Area and perimeter	Know how to find the area and perimeter of rectilinear shapes; Understand how to use formula to help find the area and perimeter of rectilinear shapes.	
3. Area of a triangle -counting squares	Know how to estimate the area of a triangle by counting squares.	
4. Area of a right-angled triangle	Know that the area of a right-angled triangle is half the area of rectangle.	
5. Area of any triangle	Know that we can use the formula base x perpendicular height then divide by 2.	
6. Area of a parallelogram	Know that the formula to find the area of a parallelogram is base x perpendicular height	
7. Volume counting cubes	Know how to find the volume of shapes by counting cubic units. 8. Volume of a cuboid – Know that the formula to find the volume of cubes and cuboids is base x height x depth.	
Vocab	National Curriculum Objectives	
Volume, solid, capacity, calculate, estimate, cube, perpendicular, right angle, perimeter, area, formula, base, height, cubic centimetres, cubic meters.	- Recognise that shapes with the same areas can have different perimeters and vice versa. - Recognise when it is possible to use formulae for area and volume of shapes. - Calculate the area of parallelograms and triangles. - Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm³, m³ and extending to other units (mm³, km³).	

Farsley Westroyd: Maths Knowledge within Small Steps



Statistics		Year 6 – Spring Block 6
Step	Knowledge	
1. Line graphs	Interpret line graphs with more than one line.	
2. Dual bar charts	Interpret dual bar charts.	
3. Read and interpret pie charts	Use the total number represented by a pie chart to work out what each equal part is worth; given the value of one part, work out the total and/or the values of other parts of the pie chart	
4. Pie charts with percentages	Know that a whole pie chart represents 100% of the data, so one half represents 50%, one quarter represents 25% and so on.	
5. Draw pie charts	Construct pie charts using a protractor. 6. The mean – Know that the formula to calculate the mean is total ÷ the number of items.	
Vocab	National Curriculum Objectives	
Mean, average, pie chart, segment, line graph, bar chart, percentage, fraction, data.	- Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. - Interpret and construct pie charts and line graphs and use these to solve problems. - Calculate the mean as an average.	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Properties of Shapes		Year 6 – Summer Block 1
Step	Knowledge	
1. Measure and classify angles	Know how to measure acute, obtuse and reflex angles with a protractor.	
2. Calculate angles	Remember that angles on a straight line always equal 180 degrees and angles round a point always equal 360 degrees.	
3. Vertically opposite angles	Recognise that vertically opposite angles share a vertex and that they are equal	
4. Angles in a triangle	Know that interior angles in a triangle equal 180 degrees.	
5. Angles in a triangle-special cases	Know how to calculate missing angles in right angled and isosceles triangles; Know that hatch marks represent equal sides/angles.	
6. Angles in a triangle-missing angle	Know how to use their knowledge of angles to find angles in a triangle.	
7. Angles in a quadrilateral	Know that angles in quadrilaterals always equal 360 degrees.	
8. Angles in polygons	Know that polygons can be split into triangles using a vertex of the polygon; multiplying the number of triangles by 180° gives the sum of the interior angles in the polygon	
9. Circles	Know that the circumference is the distance around a circle, the diameter is the is the length from one side of a circle to the other and the radius is the distance from the centre of the circle to the circumference; Know that radius is always half the diameter.	
10. Draw shapes accurately	Know how to draw shapes with accurate lengths and angles.	
11. Nets of 3D shapes	Know that a net is a 2-D figure that can be folded to create a 3-D shape; Identify 3-D shapes from their nets.	
Vocab	National Curriculum Objectives	
Nets, 2D shapes, 3D shapes, interior angles quadrilateral, isosceles, scalene, right angled triangle, interior angles.	- Draw 2 D shapes using given dimensions and angles. - Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. - Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	

Farsley Westroyd: Maths Knowledge within Small Steps



Geometry: Properties of Shapes		Year 6 – Summer Block 2
Step	Knowledge	
1. The first quadrant	Remember how to plot and read coordinates in the first quadrant.	
2. Read and plot points in four quadrants	Know how to read and plot coordinates in all four quadrants.	
3. Solve problems with coordinates	Use their knowledge of properties of shapes to calculate the coordinates of vertices of polygons.	
4. Translations	Know how to translate shapes in all four quadrants.	
5. Reflection	Know how to reflect shapes in all four quadrants and in the x and y axis.	
Vocab	National Curriculum Objectives	
Quadrant, four quadrants, translate, translation, x-axis, y-axis, axis/axes, horizontal, vertical, vertex, reflect, reflection.	- Describe positions on the full coordinate grid (all four quadrants). - Draw and translate simple shapes on the coordinate plane, and reflect them in the axes	

Farsley Westroyd: Maths Knowledge within Small Steps



Revision/Transition units	Year 6 – Summer Block 3
Step	
Time to revise KS2 content	
Problem Solving/Investigations to deepen previous learning	
Transition to secondary school maths units – focus on consolidating four operations, fractions and measurement.	