

Bowhill medium term maths planning: autumn term

Y1 & 2 Objectives to match Bowhill Yearly Overview NC & Bowhill Essentials

TERM 1 Autumn

Number: Place – Value Block 1 Wks 1-4	
Y1 National Curriculum	Y1 Bowhill Essentials
- 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, - use the language of: equal to, more than, less than (fewer), most, least	- Count on and back in ones to and from 100 and from any 1- or 2-digit number - Count on and back in 10s from any 1- or 2-digit number, e.g. 23, 33, 43, to just over 100, 95, 85, 75, etc. - Locate any number on a 1-100 grid or 0-100 beaded line/number line - Say/write the number 1 more, 1 less and 10 more, 10 less - Understand and use vocabulary: more, less, equal, least, most,
Y2 National Curriculum	Y2 Bowhill Essentials
- 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.	- Identify tens and ones in 2-digit numbers - Partition 2-digit numbers into tens and ones - Compare and order several numbers using a number line and <, > and = signs
Number: Addition & Subtraction Block 2 Wks 5-8	
Y1 National Curriculum	Y1 Bowhill Essentials
- read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs - represent and use number bonds and related subtraction facts within 20 - 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 $7 = \square - 9$.	- Read and write numbers sentences using +, - & = - Know number bonds to 10, and begin to know number bonds to 20 - Begin to be aware of unit patterns e.g. $6+3=9$, $16+3=19$, etc. - Add small numbers using counting on, subtract small numbers by counting back (can use number track/counting equipment for support) - Begin to solve missing number problems using equipment - Recognise doubles to double 6 and find related halves
Y2 National Curriculum	Y2 Bowhill Essentials
solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities applying their increasing knowledge of mental and written methods	- Know number bonds for numbers to 12 (bonds to 6, 7, 8...12) - Recognise that addition and subtraction are inverse operations and understand that $10-4=6$ as well as $6+4=10$

Bowhill Maths Curriculum Objectives: Term 1

- recall and use addition and subtraction facts to 20 fluently, - 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 addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot - recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	- Add single digit numbers by counting on - Add two digits numbers by counting on in tens and ones - Partition 2-digit numbers to add two 2-digit numbers - Count back in tens and ones to take away e.g. $35 - 3 =$ or $54 - 20 =$, - Begin to count up to find a difference e.g. $43 - 37 =$ (small gap) - Understand that in addition order does not matter but in subtraction it does
Number: Multiplication & Division: Doubling & Halving Block 3 Wks 9-10	
Y1 National Curriculum	Y1 Bowhill Essentials
- count in multiples of twos, fives and tens - recognise, find and name a half as one of two equal parts of an object, shape or quantity	- Count in 10s and begin to count in 2s - Recognise doubles to double 6 and find related halves - Half 2-digit numbers to 12 (even numbers to 20 using equipment)
Y2 National Curriculum	Y2 Bowhill Essentials
- count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward - recognise, find, name and write fractions ($\frac{1}{2}$ & $\frac{1}{4}$)	- Count in 2s, 5s, & 10s forwards and back; begin to know the 2x, 5x & 10x tables - Begin to use the x sign - Half 2-digit numbers to 40 (even numbers) recognise odd numbers can be halved but you get a half (use equipment) - Begin to quarter numbers by halving twice (use equipment)
Measures: Money Block 4 Wk 10	
Y1 National Curriculum	Y1 Bowhill Essentials
recognise and know the value of different denominations of coins and notes	Begin to identify coins 1p to £2
Y2 National Curriculum	Y2 Bowhill Essentials
- 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	- Identify coins 1p - £2 and £5, £10 & £20 notes - Begin to add to make simple amounts - Begin to calculate change using counting up (simple amounts e.g. to the £1)

ASSESSMENT WEEK – Revise previous objectives focus on place – value, addition & subtraction Y2s Formal White Rose end of autumn term assessment (teacher discession for Y1 assessment can use white rose in groups to aid teacher assessment.	
Geometry: Properties of Shape Block 5 Wk 11	
Y1 National Curriculum	Y1 Bowhill Essentials
recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles]	- Talk about shapes, naming and describing common 2d shapes including irregular shapes (circle, triangle, rectangle including square) - Begin to understand properties of different shapes
Y2 National Curriculum	Y2 Bowhill Essentials
- identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line - compare and sort common 2-D and 3-D shapes and everyday objects	- Talk about shapes naming and describing common 2d & 3d shapes including irregular shapes (4 or more shapes) - Use vocabulary: sides, corners, faces, vertices, shape names, etc. - Understand the properties of different shapes

Y3 & 4 Objectives to match Bowhill Yearly Overview NC & Bowhill Essentials

TERM 1 Autumn

Number: Place – Value Block 1 Wks 1-4	
Y3 National Curriculum	Y3 Bowhill Essentials
- count from 0 in multiples of 4, 8, 50 and 100; 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 - identify, represent and estimate numbers using different representations - read and write numbers up to 1000 in numerals and in words - solve number problems and practical problems involving these ideas.	- Understand place-value in 3-digit numbers partitioning numbers into 100s, 10s & 1s and use this to add and subtract 1s, 10s, 100s to/from 3-digit numbers - begin to understand the use of zero as a place-holder - Locate any 3-digit number on a landmarked line 0-1000 and use to order and compare numbers - Round numbers to the nearest 10 & 100 - Count in steps of, 5, 10 & 100
Y4 National Curriculum	Y4 Bowhill Essentials
- count in multiples of, 9, 25 and 1000 - find 1000 more or less than a given number - count backwards through zero - 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 - solve number and practical problems that involve all of the above and with increasingly large positive numbers	- Understand place-value in 4-digit numbers partitioning numbers into 1000s, 100s, 10s & 1s and use this to add and subtract 1s, 10s, 100s, 1000s, to/from 4-digit numbers - Understand the use of zero as a place-holder - Locate any 4-digit number on a landmarked line 0-10,000 and use to order and compare numbers - Round numbers to the nearest 10 & 100 - Count in steps of 2, 4, 5, 10, 50 & 100,
Number: Addition & Subtraction Block 2 Wks 5-8	
Y3 National Curriculum	Y3 Bowhill Essentials
- 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 addition - 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.	- Mentally add or subtract any pair of 2-digit numbers - Know bonds for all numbers to 20 & bonds to 100. - Recognise and choose appropriately two methods of completing subtractions counting up (frog) and counting back (taking away) E.g. $64 - 27 =$ counting up (frog), $64 - 31 =$ count back - Solve subtractions of 3-digit numbers using counting up (Frog) - Solve additions of 3-digit numbers using expanded column addition

Bowhill Maths Curriculum Objectives: Term 1

Y4 National Curriculum • add and subtract numbers with up to 4 digits using the formal written methods of columnar addition 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	Y4 Bowhill Essentials • Mentally add or subtract any pair of 2-digit numbers • Recognise and choose appropriately two methods of completing subtractions counting up (frog) and counting back (taking away) • Solve subtractions of 3 & 4-digit numbers using counting up (Frog) • Solve additions of & 4--digit numbers using column addition, first expanded method moving to concise when place value and accuracy are secure.
Number: Multiplication & Division: Block 3 Wks 9-10	
Y3 National Curriculum • recall and use multiplication and division facts for the 3 & 4 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that 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 objects.	Y1 Bowhill Essentials • Know and recite multiplication and begin to know division facts for the 2x, 3x, 4x, 5x, & 10x tables up to 12th multiple including multiplying by 0 & 1 • Multiply 2-digit numbers by 10 & 100 and divide multiples of 10 (to 4-digits) by 10. Understand the effect of multiplying & dividing by 10 & 100 (sliding digits up & down a place-value grid) • Multiply 2-digit numbers by single digit numbers using partitioning and moving to grid method • Partition to double and halve numbers • Know division is the inverse of multiplication; recognise division as multiplication with holes e.g. $21 \div 3 = \square$, $\square \times 3 = 21$
Y4 National Curriculum • recall 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 • 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.	Y2 Bowhill Essentials • Multiply & divide 2- & 3-digit numbers by 10, 100 & 1000 getting answers less than 6-digits and only one decimal place. • Begin to understand decimal numbers • Know and recite multiplication and division facts for the 2x, 3x, 4x, 5x, 6x, 9x, 10x & 11x tables up to 12th multiple including multiplying by 0 & 1 • Multiply 1-digit numbers by 2-digit & (friendly) 3-digit numbers using grid method • Multiply two 2-digit numbers using grid method • Know how to use 'efficient chunking' for division above the range of tables facts • Use doubling and halving to multiply and divide by 2 and 4 recognising this is also calculating a half or a quarter of a number.

Measures: Money Block 4 Wk 10	
Y3 National Curriculum	Y3 Bowhill Essentials
add and subtract amounts of money to give change, using both £ and p in practical contexts	- Add amounts of money e.g. £4.65 + £3.50 - Find change by counting up (frog)
Y4 National Curriculum	Y4 Bowhill Essentials
	Solve addition & subtraction problems involving money including addition of 2 or 3 amounts (column addition) and finding change from £5, £10 & £20 using frog.
ASSESSMENT WEEK – Revise previous objectives focus on place – value, addition & subtraction & multiplication	
Formal White Rose end of autumn term assessment	
Geometry: Properties of Shape Block 5 Wk 11	
Y3 National Curriculum	Y3 Bowhill Essentials
- draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them - 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.	- Name and describe common 2d & 3d shapes including irregular shapes (circle, triangle, rectangles including square, quadrilateral including rhombus, parallelogram & trapezium, pentagon, hexagon & octagon). - Identify right angles as 90° in shapes, and also in turns; recognise angles as less than and greater than 90° - Recognise and draw horizontal, vertical and parallel lines,
Y4 National Curriculum	Y4 Bowhill Essentials
- compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes - identify acute and obtuse angles and compare and order angles up to two right angles by size - 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.	- Name and describe common 2d & 3d shapes including irregular shapes (circle, triangle, rectangles including square, quadrilateral including rhombus, kite, parallelogram & trapezium, pentagon, hexagon, heptagon & octagon). - Identify acute, right & obtuse angles, compare and order angles up to 180°. - Begin to recognise & draw symmetry in simple polygons.

Y5 & 6 Objectives to match Bowhill Yearly Overview NC & Bowhill Essentials

TERM 1 Autumn

Number: Place – Value Block 1 Wks 1-2	
Y5 National Curriculum	Y5 Bowhill Essentials
• read, write, order and compare numbers to 1,000,000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 • round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 • solve number problems and practical problems that involve all of the above	• Locate 5-digit numbers on a landmarked line; use to compare & order numbers • Round to the nearest ten, hundred, thousand and ten-thousand • Understand the effect of multiplying and dividing by 10, 100 & 1000
Y6 National Curriculum	Y6 Bowhill Essentials
• 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 • solve number and practical problems that involve all of the above.	• Locate numbers to 999,999 on a landmarked line; use to compare & order numbers • Round to the nearest ten, hundred, thousand, ten-thousand and hundred thousand • Understand the effect of multiplying and dividing by 10, 100, 100 & 10,000
Number: Addition & Subtraction Block 2 Wks 3-4	
Y5 National Curriculum	Y5 Bowhill Essentials
• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition <i>and subtraction</i>) • add and subtract numbers mentally with increasingly large numbers • 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	• Add or subtract 0.1s, 0.01s, 1s, 10s, 100s, 1000s, from any number where no crossing boundaries is required (no-work place-value additions & subtractions) • Add or subtract mentally with confidence – where numbers are less than 100 or calculation relies upon simple addition/subtraction and place-value • Confidently add 3- & 4-digit numbers using column addition (use expanded method for any who make errors) • Subtract 3- & 4-digit numbers using counting up (frog) • Begin to subtract decimal numbers accurately (1-place) using counting up (frog)

Bowhill Maths Curriculum Objectives: Term 1

Y6 National Curriculum	Y6 Bowhill Essentials
• use their knowledge of the order of operations to carry out calculations involving the four operations • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • perform mental calculations, including with mixed operations and large numbers	• Add or subtract mentally with confidence – where numbers are less than 100 or the calculation relies upon simple addition/subtraction and place-value • Add several large numbers accurately and add several decimal numbers accurately using column addition • Subtract 3-, 4-, 5-, 6-digit numbers using counting up (frog) or decomposition (column subtraction) • Subtract decimal numbers accurately (2-places) using counting up (frog) • Use bidmas and brackets accurately
Number: Multiplication & Division Block 3 Wks 5-6	
Y5 National Curriculum	Y5 Bowhill Essentials
• identify multiples and factors, including finding all factor pairs of a number, and common factors of two 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 • <i>multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers</i> • multiply and divide numbers mentally drawing upon known facts • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	• Know all multiplication and division facts for tables up to 12x12 • Count in multiples of 2, 3, 5, 10, 20, 25, 50, 100, 1000, etc. Understand and use the term multiple • Begin to know and use the term factors working out common factors of friendly 2-digit numbers • Begin to identify prime numbers • Multiply 2- & 3-digit numbers by 1- & 2-digit numbers using grid method • Use mental methods of multiplication and division for multiplying by 2, 4, 8, 5, 20, 50, etc. (x10, x100 and doubling) • Divide 2- & 3-digit numbers by numbers less than 15 using efficient chunking
Y6 National Curriculum	Y6 Bowhill Essentials
• multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method <i>of long multiplication</i> • divide numbers up to 4 digits by a two-digit whole number using the formal written method <i>of long division</i>, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • divide numbers up to 4 digits by a two-digit number using <i>the formal written method of short division</i> where appropriate, interpreting remainders according to the context • perform mental calculations, including with mixed operations and large numbers	• Know all multiplication and division facts for tables up to 12x12 • Count in multiples of 2, 3, 5, 10, 20, 25, 50, 100, 1000, etc. Understand and use the term multiple • Know and use the term factors working out common factors of 2- & 3-digit numbers • Identify prime numbers; know first 10 primes • Understand and use term & notation for square and cube numbers; know first 15 square numbers • Multiply 2-, 3- & 4-digit numbers by 1- & 2-digit numbers using grid method

Bowhill Maths Curriculum Objectives: Term 1

• identify common factors, common multiples and prime numbers • use their knowledge of the order of operations to carry out calculations involving the four operations	• Use mental methods of multiplication and division for multiplying by 2, 4, 8, 5, 20, 50, etc. (x10, x100 and doubling) • Divide 2-, 3- & 4-digit numbers by 1- & 2-digit numbers using efficient chunking
Number: Decimals Block 4 Wks 7-10	
Y5 National Curriculum	Y5 Bowhill Essentials
• read, write, order and compare numbers to 1,000,000 and determine the value of each digit	• Understand a one-place decimal number as a number of tenths and a begin to see a two place decimal number is a number of hundredths • Begin to round one-place decimals to the nearest whole number • Understand the effect of multiplying and dividing by 10, 100 & 1000
Y6 National Curriculum	Y6 Bowhill Essentials
• 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 • solve number and practical problems that involve all of the above.	• Round decimals to the nearest whole number and tenth, begin to round to the nearest hundredth • Understand a one-place decimal number as a number of tenths and a two place decimal number is a number of hundredths and a three-place decimal number is a number of thousandths • Understand the effect of multiplying and dividing by 10, 100, 1000 & 10,000
Measures: Money & Time Block 4 Wk 10	
Y5 National Curriculum	Y5 Bowhill Essentials
• solve problems involving converting between units of time • use all four operations to solve problems involving measure [for example, money, time] using decimal notation, including scaling.	• Add amounts of money using mental strategies and column addition • Find change by counting up (frog) • Calculate time intervals (using frog) • Read and interpret time tables to ask & answer questions
Y6 National Curriculum	Y6 Bowhill Essentials
	• Solve problems involving money including addition, subtraction (using frog) multiplication (grid) and division (chunking); • Calculate time intervals (using frog) • Read and interpret time tables to ask & answer questions
ASSESSMENT WEEK – Revise previous objectives Formal White Rose end of autumn term assessment (remove fractions questions)	
Y6 – Practice SATs	

Geometry & Measures: Properties of Shape, Area & Perimeter Block 5 Wk 11	
Y5 National Curriculum	Y5 Bowhill Essentials
• identify 3-D shapes, including cubes and other cuboids, from 2-D representations • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes • distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	• Name, describe, classify and draw 2d & 3d shapes including irregular shapes (triangles including isosceles, equilateral, scalene, rectangles including square, quadrilaterals including rhombus, parallelogram, kite & trapezium, pentagon, hexagon & heptagon, octagon). • Identify and classify angles: acute, right, obtuse & reflex and 360° • Recognise and draw horizontal, vertical, parallel and perpendicular lines, • Calculate the area and perimeter of rectangles including squares and begin to calculate the area of rectilinear shapes.
Y6 National Curriculum	Y6 Bowhill Essentials
• draw 2-D shapes using given dimensions and angles • compare and classify geometric shapes based on their properties and sizes • illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • calculate the area of parallelograms and triangles • recognise that shapes with the same areas can have different perimeters and vice versa	• Name, describe, classify and draw 2d & 3d shapes including irregular shapes (triangles including isosceles, equilateral, scalene, rectangles including square, quadrilaterals including rhombus, parallelogram, kite & trapezium, pentagon, hexagon & heptagon, octagon). • Identify and classify angles: acute, right, obtuse & reflex and 360° • Recognise and draw horizontal, vertical, parallel and perpendicular lines, • Calculate the area and perimeter of rectangles including squares, rectilinear shapes, triangles & <i>parallelograms</i>