



EYFS	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Autumn</b>	Getting to know you!		Match, sort and share		Talk about measure and patterns.		It's me 1,2,3!		Circles and triangles	Numbers 1,2,3,4,5		Shapes with 4 sides.	
<b>Fluency</b>	<p align="center"><b>Mastering Number (2 x 5 week blocks plus consolidation weeks)</b></p> <p>Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> <li>• identify when a set can be subitised and when counting is needed</li> <li>• subitise different arrangements, both unstructured and structured, including using the Hungarian number frame</li> <li>• make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills               <ul style="list-style-type: none"> <li>• spot smaller numbers 'hiding' inside larger numbers</li> </ul> </li> <li>• connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers</li> <li>• hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number</li> </ul> <p>• develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds</p> <ul style="list-style-type: none"> <li>• compare sets of objects by matching</li> <li>• begin to develop the language of 'whole' when talking about objects which have parts</li> </ul>												
<b>Spring</b>	Alive in 5!		Mass and capacity	Growing 6, 7 and 8.		Length, height and time		Building 9 and 10.		Exploring 3d shape		Consolidation	
<b>Fluency</b>	<p align="center"><b>Mastering Number (2 x 5 week blocks plus consolidation weeks)</b></p> <p>Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> <li>• continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals               <ul style="list-style-type: none"> <li>• begin to identify missing parts for numbers within 5</li> </ul> </li> <li>• explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame               <ul style="list-style-type: none"> <li>• focus on equal and unequal groups when comparing numbers</li> <li>understand that two equal groups can be called a 'double' and connect this to finger patterns                   <ul style="list-style-type: none"> <li>• sort odd and even numbers according to their 'shape'</li> </ul> </li> </ul> </li> <li>• continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern               <ul style="list-style-type: none"> <li>• order numbers and play track games</li> </ul> </li> <li>• join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers</li> </ul>												
<b>Summer</b>	To 20 and beyond.		How many now?	Manipulate, compose and decompose.		Sharing and grouping		Visualise, make and map		Make connections		Consolidation	
<b>Fluency</b>	<p align="center"><b>Mastering Number (2 x 5 week blocks plus consolidation weeks)</b></p> <p>Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> <li>• continue to develop their counting skills, counting larger sets as well as counting actions and sounds</li> <li>• explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame               <ul style="list-style-type: none"> <li>• compare quantities and numbers, including sets of objects which have different attributes</li> </ul> </li> <li>• continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2               <ul style="list-style-type: none"> <li>• begin to generalise about 'one more than' and 'one less than' numbers within 10</li> <li>• continue to identify when sets can be subitised and when counting is necessary                   <ul style="list-style-type: none"> <li>• develop conceptual subitising skills including when using a rekenrek</li> </ul> </li> </ul> </li> </ul>												



Year 1	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Autumn</b>	Place Value within 10.					Addition and subtraction.					Geometry	Consolidation	
<b>Fluency KS1</b>	<p><b>Mastering Number (2 x 5 week blocks plus consolidation weeks)</b>            Pupils will have an opportunity to consolidate the Early Learning Goals and continue to explore the composition of numbers within 10, and the position of these numbers in the linear number system.            Pupils will:</p> <ul style="list-style-type: none"> <li>• subitise within 5, including when using a rekenrek, and re-cap the composition of 5</li> <li>• develop their understanding of the numbers 6 to 9 using the '5 and a bit' structure</li> <li>• compare numbers within 10 and use precise mathematical language when doing so</li> <li>• re-cap the order of numbers within 10 and connect this to '1 more' and '1 less' than a given number</li> </ul>												
<b>Spring</b>	Place value within 20.			Addition and Subtraction.			Place Value within 50.		Length and height.		Mass and volume		Consolidation
<b>Fluency</b>	<p><b>Mastering Number (2 x 5 week blocks plus consolidation weeks)</b>            Pupils will continue to explore the composition of numbers within 10 and explore addition and subtraction structures and the related language (without the use of symbols).            Pupils will:</p> <ul style="list-style-type: none"> <li>• explore the composition of each of the numbers 7 and 9</li> <li>• explore the composition of odd and even numbers, seeing that even numbers can be made of two odd or two even parts, and that odd numbers can be composed of one odd part and one even part</li> <li>• identify the number that is two more or two less than a given odd or even number, identifying that two more/ less than an odd number is the next/ previous odd number, and two more/ less than an even number is the next/ previous even number</li> </ul>												
<b>Summer</b>	Multiplication and division			Fractions		Geometry	Place value within 100		Money	Time		Consolidation	
<b>Fluency</b>	<p><b>Mastering Number (2 x 5 week blocks plus consolidation weeks)</b>            Pupils will explore the composition of numbers within 20 and their position in the linear number system. They will connect addition and subtraction expressions and equations to 'number stories'.            Pupils will:</p> <ul style="list-style-type: none"> <li>• explore the composition of the numbers 11 to 19 as '10 and a bit' and compare numbers within 20</li> <li>• connect the composition of the numbers 11 to 19 to their position in the linear number system, including identifying the midpoints of 5, 10 and 15</li> <li>• compare numbers within 20</li> <li>• understand how addition and subtraction equations can represent previously explored structures of addition and subtraction (aggregation/ partitioning/ augmentation/ reduction)</li> <li>• explore the structure of even numbers (including that even numbers can be composed by doubling any number, and can be composed of 2s)</li> <li>• explore the structure of the odd numbers as being composed of 2s and 1 more</li> <li>• explore the composition of each of the numbers 6, 8, and 10</li> <li>• explore number tracks and number lines and identify the differences between them</li> </ul>												



Year 2	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Autumn</b>	Place value				Addition and Subtraction					Shape			Consolidation
<b>Fluency</b>	<p><b>KS1 Mastering Number (2 x 5 week blocks plus consolidation weeks)</b>            Pupils will have an opportunity to consolidate their understanding and recall of number bonds within 10; they will re-cap the composition of the numbers 11 to 20 and reason about their position within the linear number system.            Pupils will:</p> <ul style="list-style-type: none"> <li>• review the composition of the numbers 6 to 9 as '5 and a bit'</li> <li>• compare numbers using the language of comparison and use the symbols <math>&lt;</math> <math>&gt;</math> <math>=</math></li> <li>• review the structure of even numbers (including exploring how even numbers can be composed of two odd parts or two even parts) and the composition of each of 6, 8 and 10</li> <li>• review the structure of odd numbers (including exploring how odd numbers can be composed of one odd part and one even part) and the composition of each of 7 and 9</li> </ul>												
<b>Spring</b>	Money		Multiplication and division					Length and height		Mass, capacity and temperature			Consolidation
<b>Fluency</b>	<p><b>KS1 Mastering Number (2 x 5 week blocks plus consolidation weeks)</b>            Pupils will have an opportunity to use their knowledge of the composition of numbers within 10 to calculate within 20; they will explore the links between the numbers in the linear number system within 10 to numbers within 100, focusing on multiples of 10 and the midpoint of 50.            Pupils will:</p> <ul style="list-style-type: none"> <li>• explore how the numbers 6 to 9 can be doubled using the '5 and a bit' and '10 and a bit' structure</li> <li>• use doubles to calculate near doubles</li> <li>• use bonds of 10 to reason about bonds of 20, in which the given addend is greater than 10</li> <li>• use known number bonds within 10 to calculate within 20, working within the 10-boundary</li> </ul>												
<b>Summer</b>	Fractions			Time			Statistics		Position and direction		Consolidation		
<b>Fluency</b>	<p><b>KS1 Mastering Number (2 x 5 week blocks plus consolidation weeks)</b>            Pupils will have further opportunities to use their knowledge of the composition of numbers within 10 to calculate within 20 and to reason about equations and inequalities.            Pupils will:</p> <ul style="list-style-type: none"> <li>• continue to explore a range of strategies to subtract across the 10-boundary</li> <li>• review bonds of 20 in which the given addend is greater than 10, and reason about bonds of 20, in which the given addend is less than 10</li> <li>• practise previously explored strategies to support their reasoning about inequalities and equations</li> <li>• review doubles and near doubles and transform additions in which two addends are adjacent odd/ even numbers into doubles</li> <li>• consolidate their understanding of the numbers 10 and 20 as '10 and a bit'</li> <li>• consolidate their understanding of the linear number system to 20 and reason about midpoints</li> <li>• use their knowledge of bonds of 10 to find three addends that sum to 10</li> <li>• use their knowledge of the composition of numbers within 20 to add and subtract across the 10-boundary</li> <li>• use their understanding of the linear number system to 10 to position multiples of 10 on a 0 - 100 number line and reason about midpoints</li> <li>• consolidate previously taught facts and strategies through continued, varied practice</li> </ul>												



Year 3	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Autumn</b>	Place Value			Addition and Subtraction					Multiplication and Division Multiples of 2, 5, 10 Multiply and divide by 3,4,8				Consolidation
<b>Fluency</b>	Adding 1 Commutative: 7 +1 and 1 +7	Doubles of numbers to 5 1+1, 2+2, 3+3, 4+4, 5+5	Adding 2 Commutative: 7 +2 and 2 +7	Number bonds to 10 Commutative: 0+10, 1+9, 2+8, 3+7, 4+6		Adding 10 To single digits	Adding 0	The ones without a family 3 +5, 5+3, 3+6, 6+3	Near Doubles within 10 3+4 4+3, 4+5, 5+4	Doubles of numbers to 10 6+6, 7+7, 8+8, 9+9, 10+10	Near doubles bridging 10 5+6, 6+5, 6+7, 7+6	Near doubles bridging 10 7+8, 8+7, 8+9, 9+8	Bridging 10 3+8, 8+3 3+9, 9+3
<b>Spring</b>	Multiplication and Division Formal methods			Length and Perimeter			Fractions			Mass and capacity			Fractions
<b>Fluency</b>	Bridging 10 4+7, 7+4, 4+8, 8+4, 4+9, 9+4	Bridging 10 5+7, 7+5, 5+8, 8+5, 5+9, 9+5	Bridging 10 6+8, 8+6, 6+9, 9+6	All additive facts mix	2 x tables (8 new facts) (5 weeks) 2x2, 3x2, 4x2, 5x2, 6x2, 7x2 8x2, 9x2 Multiplier first, commutativity, division.					Square numbers (7 new facts) (5 weeks) 3x3, 4x4, 5x5, 6x6, 7x7, 8x8, 9x9			
<b>Summer</b>	Fractions		Money		Time			Shape		Statistics		Consolidation	
<b>Fluency</b>	Square Numbers Cont.	5 x tables (6 new facts) (5 weeks) 3x5, 4x5, 6x5, 7x5, 8x5, 9x5					3 x tables (5 new facts) (5 weeks) 4x3, 6x3, 7x3, 8x3, 9x3					Consolidation of foundational fluency from the year.	



Year 4	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Autumn</b>	Place Value				Addition and Subtraction			Area	Multiplication and Division A Multiples of 3 Multiply and divide by 6, 9, 7, 11, 12			Consolidation	
<b>Fluency</b>	Year 3 foundational Fluency Recap (inc. 3x)			4 x table (4 new facts) (5 weeks) 6x4, 7x4, 8x4, 9x4				Four operations x 3 days Times Tables online x 2 days Times table consolidation			6 x table (3 new facts) (3 weeks) 7x6, 8x6, 9x6		
<b>Spring</b>	Multiplication and Division B			Length and Perimeter		Fractions			Decimals A			Consolidation	
<b>Fluency</b>	6 x table cont.	7 x table (2 new facts) (3 weeks) 8x7, 9x7			8 x table (1 new fact) (2 weeks) 9x8		9 x table (0 new facts!) (2 weeks)		Squares recap	10 and 11 x table (pattern spotting and new facts 11x11, 11x12)		12 x table (4 weeks) (all new facts)	
<b>Summer</b>	Decimals B		Money		Time		MTC	Shape		Statistics	Position and Direction		Consolidation
<b>Fluency</b>	12 x table (4 weeks) (all new facts)		All x tables consolidation				MTC	Times tables consolidation and intervention 2 x week) Weekly arithmetic Quiz (1 x week) Arithmetic Review (2 x a week)					



Year 5	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Autumn</b>	Place Value			Addition and subtraction		Multiplication and division			Fractions A				
<b>Fluency</b>	Year 4 Arithmetic Consolidation			Daily Arithmetic Review (4 x a week) and Weekly Quiz (1 x a week) based on Foundational Fluency Facts									
<b>Spring</b>	Multiplication and division B			Fractions B		Decimals and percentages		Perimeter and area		Statistics		Consolidation	
<b>Fluency</b>	Daily Arithmetic Review (4 x a week) and Weekly Quiz (1 x a week) based on Foundational Fluency Facts												
<b>Summer</b>	Shape			Position and direction		Decimals		Negative numbers	Converting units		Volume	Consolidation	
<b>Fluency</b>	Daily Arithmetic Review (4 x a week) and Weekly Quiz (1 x a week) based on Foundational Fluency Facts												



Year 6	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Autumn</b>	Place value		Addition and subtraction, Multiplication and division					Fractions A		Fractions B		Converting units	Consolidation
<b>Fluency</b>	Year 5 Arithmetic Consolidation			Daily Arithmetic Review (4 x a week) and Weekly Quiz (1 x a week) based on Foundational Fluency Facts									
<b>Spring</b>	Ratio		Algebra		Decimals		Fractions, decimals and percentages		Area, perimeter and volume		Statistics	Consolidation	
<b>Fluency</b>	Daily Arithmetic Review (4 x a week) and Weekly Quiz (1 x a week) based on Foundational Fluency Facts												
<b>Summer</b>	Shape			Position and direction	Consolidation and problem solving								
<b>Fluency</b>	Daily Arithmetic Review (4 x a week) and Weekly Quiz (1 x a week) based on Foundational Fluency Facts												



**Badger Hill: Foundational Fluency Facts (and procedures)**

**Year 1**

1. Adding 1 (e.g.  $7 + 1$  and  $1 + 7$ )

2. Doubles of numbers to 5 (e.g.  $4 + 4$ )

3. Adding 2 (e.g.  $4 + 2$  and  $2 + 4$ )

4. Number bonds to 10 (e.g.  $8 + 2$  and  $2 + 8$ )

5. Adding 0 to a number (e.g.  $3 + 0$  and  $0 + 3$ )

**Year 2 (including consolidation from Year 1)**

1. Adding 10 to a number (e.g.  $5 + 10$  and  $10 + 5$ )

2. Near doubles (e.g.  $3 + 4$  and  $4 + 3$ )

3. The ones without a family!  $5 + 3$ ,  $3 + 5$ ,  $6 + 3$ ,  $3 + 6$

4. Doubles of numbers 10 (eg. bridging 10)

5. Near doubles bridging 10 (eg.  $6 + 7$ )

6. Bridging and Compensating through 10 (eg  $8 + 4$ )





**Year 3 (including consolidation from previous years)**

1. Secure fluency in addition and subtraction facts to and that bridge 10, through continued practice.

2. Recall multiplication facts, and corresponding division facts, in the 2x, 5x, 3x tables, and square multiplication facts, and recognise products in these multiplication tables as multiples of the corresponding number.

**Year 4 (including consolidation from previous years)**

1. Secure fluency in the 2x, 5x, 3x tables, and square multiplication facts.

2. Recall multiplication facts, and corresponding division facts, in the 4x, 6x, 7x, 8x, 9x, 10x, 11x, 12x multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.

3. find 1000 more or less than a given number

4. recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)

5. add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate

6. estimate and use inverse operations to check answers to a calculation

7. 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

8. recognise and use factor pairs and commutativity in mental calculations

9. multiply two-digit and three-digit numbers by a one-digit number using formal written layout

10. recognise and show, using diagrams, families of common equivalent fractions count up and down in hundredths;



11. recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.

12. add and subtract fractions with the same denominator

13. recognise and write decimal equivalents of any number of tenths or hundredths

14. recognise and write decimal equivalents to  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$  find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths

15. compare numbers with the same number of decimal places up to two decimal places

**Year 5 (including consolidation from previous years)**

1. Secure multiplication facts, and corresponding division facts up to  $12 \times$  multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.

2. read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit

3. count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000

4. interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero

5. round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000

6. add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

7. add and subtract numbers mentally with increasingly large numbers

8. 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



9. multiply and divide numbers mentally drawing upon known facts

10. divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately

11. multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

12. recognise and use square numbers and cube numbers, and the notation for squared (  $2$  ) and cubed (  $3$  )

13. compare and order fractions whose denominators are all multiples of the same number

14. identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths

15. 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,  $5 \frac{2}{4} + 5 \frac{4}{6} = 5 \frac{6}{6} = 1 \frac{5}{6}$  ]

16. add and subtract fractions with the same denominator and denominators that are multiples of the same number

17. multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

18. read and write decimal numbers as fractions [for example,  $0.71 = \frac{71}{100}$  ]

19. recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

20. read, write, order and compare numbers with up to three decimal places

**Year 6 (including consolidation from previous years)**

1. read, write, order and compare numbers up to 10 000 000 and determine the value of each digit



2. use negative numbers in context, and calculate intervals across zero
3. multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
4. divide numbers up to 4 digits by a two-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
5. divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
6. perform mental calculations, including with mixed operations and large numbers
7. use their knowledge of the order of operations to carry out calculations involving the four operations
8. use common factors to simplify fractions; use common multiples to express fractions in the same denomination
9. compare and order fractions, including fractions $> 1$
10. add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
11. multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $4 \frac{1}{2} \times 2 \frac{1}{2} = 8 \frac{1}{2}$ ]
12. divide proper fractions by whole numbers [for example, $3 \frac{1}{2} \div 2 = 6 \frac{1}{4}$ ] associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$ ]
13. identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
14. multiply one-digit numbers with up to two decimal places by whole numbers
15. use written division methods in cases where the answer has up to two decimal places



16. recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.