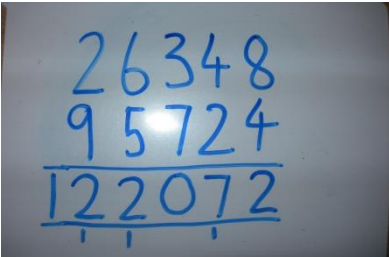
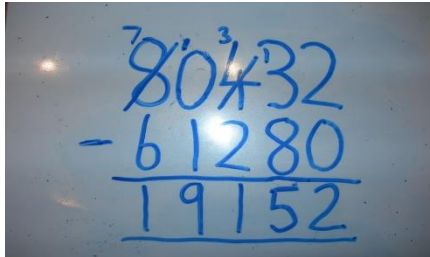
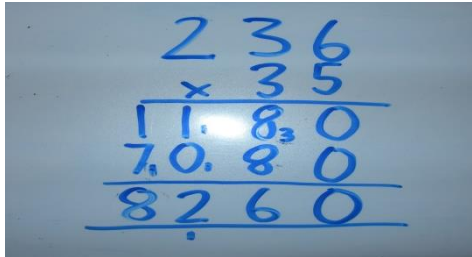
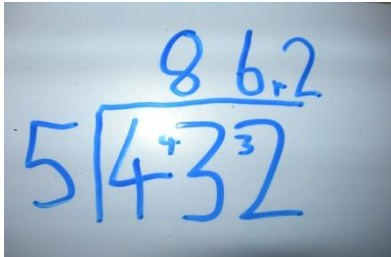
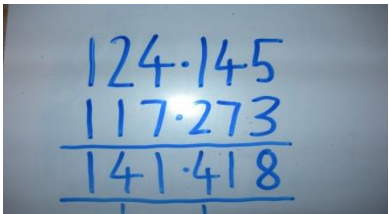
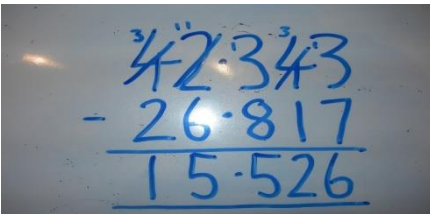
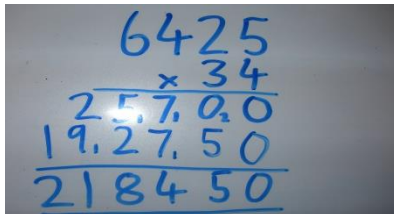
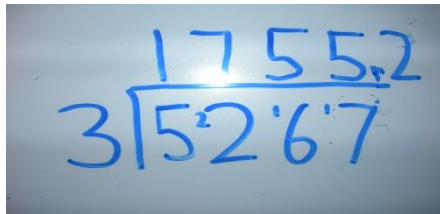


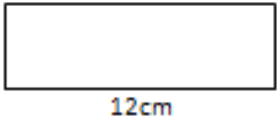
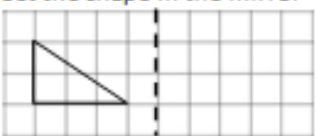

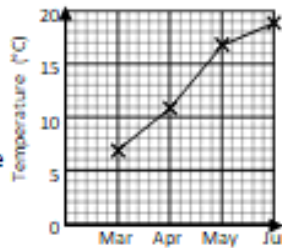
MELLING PRIMARY SCHOOL

Year 5 Mathematics Learning Objectives	
PLACE VALUE	1. Read, write, order & compare numbers to at least 1 000 000 and determine the value of each digit.
	2. Count forwards or backwards in steps of, or 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 and 100 000
	3. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.
	4. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.
ADDITION AND SUBTRACTION	5. Add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction).
	6. Add and subtract numbers mentally with increasingly large numbers. Use rounding to check answers to calculations and levels of accuracy.
	7. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
MULTIPLICATION AND DIVISION	8. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.
	9. 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.
	10. Multiply numbers up to 4 digits by a 1- or 2-digit number using a formal written method. Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division.
	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 and cubed.
FRACTIONS	13. Compare and order fractions whose denominators are all multiples of the same number. Add and subtract fractions with the same denominator and 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.
	16. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
	17. Round decimals with two decimal places to the nearest whole number and to one decimal place. Read and write decimal numbers as fractions (e.g. $0.72 = \frac{72}{100}$).
	18. Read, write, order and compare numbers with up to three decimal places. Solve problems involving numbers up to three decimal places.
	19. Write percentages as a fraction. Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{3}{5}$, $\frac{2}{5}$ and those with a denominator of a multiple of 10 or 25.
MEASURE	20. Convert between different units of metric measure (e.g. km & m; cm & m; cm & mm; g & kg; l & ml). Use approx. equivalences between metric and imperial units (e.g. inches, pounds & pints).
	21. Measure & calculate the perimeter of composite rectilinear shapes in cm/m. Calculate the area of squares/rectangles using standard units, square cm/m and estimate the area of irregular shapes.
	22. Estimate volume (e.g. using 1 cm blocks to build cubes/cuboids) and capacity (e.g. using water).
	23. Solve problems involving converting between units of time. Use all four operations to solve probs involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.
GEOMETRY	24. Identify 3D shapes, including cubes and other cuboids, from 2D representations.
	25. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees.
	26. 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° .
	27. Use the properties of rectangles to deduce related facts and find missing lengths and angles.
	28. 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.
STATISTICS	29. Solve comparison, sum and difference problems using information presented in a line graph.
	30. Complete, read and interpret information in tables, including timetables.

Calculation Methods to be taught to Y5 children during the year

Year 5 (emerging)			
Addition	Subtraction	Multiplication	Division
<p>Compact column addition of 2 5-digit numbers</p>  $\begin{array}{r} 26348 \\ 95724 \\ \hline 122072 \end{array}$	<p>Column subtraction of 2 5-digit numbers</p>  $\begin{array}{r} 80432 \\ -61280 \\ \hline 19152 \end{array}$	<p>Multiply a 3-digit number by 2-digit number</p>  $\begin{array}{r} 236 \\ \times 35 \\ \hline 1180 \\ 7080 \\ \hline 8260 \end{array}$	<p>Short division of a 3-digit number by a single digit</p>  $\begin{array}{r} 86.2 \\ 5 \overline{)432} \end{array}$
Year 5 (expected)			
Addition	Subtraction	Multiplication	Division
<p>Column column addition up to 3 decimal places</p>  $\begin{array}{r} 124.145 \\ 117.273 \\ \hline 141.418 \end{array}$	<p>Column subtraction up to 3 decimal places</p>  $\begin{array}{r} 42.343 \\ -26.817 \\ \hline 15.526 \end{array}$	<p>Multiply a 4-digit number by a 2-digit number</p>  $\begin{array}{r} 6425 \\ \times 34 \\ \hline 25700 \\ 192750 \\ \hline 218450 \end{array}$	<p>Short division of a 4-digit by a single digit</p>  $\begin{array}{r} 1755.2 \\ 3 \overline{)5267} \end{array}$

Example of Weekly Maths Skills covered in Year 5

A: Place Value, Add and Subtract		B: Multiply, Divide and Fractions		C: Measure, Geometry and Statistics	
1. What is the value of the 1 in this number? 1,348,567	5:1	11. Write all of the factors of 15.	5:8	21. If 1 inch is approximately 2.5 centimetres, about how many centimetres are there in 6 inches?	5:20
2. Put these in order, smallest first: 82,550 108,275 69,865 212,000	5:3	12. Which of the following are prime numbers ? 1 2 4 6 9 11	5:9		
3. Round 247,599 to the nearest ten thousand .	5:2	13. $1,016 \div 8$	5:10	22. Calculate the area of this rectangle: 3cm  12cm	5:21
4. What is the missing number? 837,400 847,400 <input type="text"/> 867,400	5:2	14. 46.5×100	5:11		
5. Put these in order, smallest first: -11, 8, 0, 3, -5, -9	5:3	15. What is 2^3 ?	5:12	23. Reflect the shape in the mirror line. 	5:28
6. What year is represented by these Roman Numerals? MMXIV	5:4	16. Put these in order, smallest first: $\frac{2}{3}$ $\frac{3}{6}$ $\frac{9}{12}$	5:13		
7. $28,629 - 13,535 =$	5:5	17. Find an equivalent fraction of $\frac{1}{2}$. 	5:14	24. Average temperatures in Spring: Between which two months did the temperature increase the most ? 	5:29
8. $110,250 + 12,890 =$	5:5	18. Write the answer as a mixed number . $\frac{4}{7} + \frac{6}{7}$	5:15		
9. Complete this sum without written working. $8,600 + 4,250 =$	5:6	19. $\frac{3}{4} \times 12 =$	5:16		
10. The temp. <u>was</u> -2°C . It rose by 7°C , <u>then</u> dropped by 4°C . What is it now?	5:7	20. Write 0.63 as a fraction.	5:17		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	

Name: _____

Mixed x and ÷ table test a

1) $5 \times 6 =$

2) $144 \div 12 =$

3) $27 \div 9 =$

4) $3 \times 7 =$

5) $24 \div 6 =$

6) $11 \times 12 =$

7) $35 \div 7 =$

8) $7 \times 7 =$

9) $54 \div 9 =$

10) $18 \div 3 =$

Score: _____

If children are going to become confident with all forms of maths, they **MUST** develop an instant recall of all multiplication and division facts. This means being able to answer random multiplication questions within a few seconds such as $8 \times 3 = 24$. This is not the same as being able to count in 3s.

They will need to practice these types of questions frequently at home to build up their instant recall of these facts. The online programme Times Table Rockstars will help with this.

Y5 Multiplication Tables Testing

In school, Y5 children are tested at least twice a week on their multiplication and division tables. They are expected to get all 10 questions correct in one minute on three separate occasions before moving onto their next multiplication/division test. Marked tests are sent home each week by the class teacher which will help parents to see the progress their child is making and which multiplication tables need further practice. At the start of Year 5, children are re-tested on their individual tables multiplication and division tests, which they should have a good knowledge of from Y5. Once completed, they then progress onto their corresponding multiplication/division tables in the following order:

mixed x table tests

mixed x table tests with division

Each time children progress onto a new multiplication/division table, there will be less facts to learn. For example, when learning the 6 x table with division, children should already know 1×6 , 2×6 , 3×6 , 4×6 , 5×6 , 8×6 and 10×6 from their previous tables in addition to $60 \div 10$, $12 \div 6$, $30 \div 5$ etc.

Useful websites for Maths

The school subscribes to the following interactive maths programs. Children have their own login details so they are able to access both of these programs at home as well as in school.

Mathletics

<https://login.mathletics.com/>

Times Table Rockstars

<https://trockstars.com/>

Other useful websites for practising tables are :

<https://www.timestables.co.uk/multiplication-tables-check/>

<https://www.topmarks.co.uk/maths-games/hit-the-button>