Griffe Field Primary School

Year 5 - Maths non – negotiables

The non – negotiables are generally the essential elements and basics of maths that are crucial for children's mathematical learning and progression.

Knowledge of number facts and fluency in them are a vital part of maths for each year group. Rapid recall of number facts can provide the basic knowledge required for most aspects of primary mathematics, including mental and written calculations, fractions, decimals, percentages and problem solving.
Knowing and using number facts can help support children's understanding and progression in Maths.

I can	Maths non - negotiables	Date
Number and Place Value	I can read, write and order numbers to 1,000,000 and know the value of each digit.	
	I can count forwards and backwards in steps of 100 and 1,000 from any number up to 1,000,000.	
	I can calculate the value of each digit up to 1,000,000 by partitioning in different ways.	
	I can count forwards and backwards with positive and negative whole numbers through zero.	
	I can round any 6 digit number to the nearest 10,100,1000, 10,000	
	I can calculate 1000, 10,000, 100,000 more or less than a number.	
	I can read Roman numerals to 100.	
	I can count in multiples of 6s, 7s, 8s, 9s, 25s, 50s, 75s and 1000s	
	I can read, write, compare and order numbers up to 3 decimal places	
	I can round decimal numbers to the nearest whole number, tenth, hundredth	
	I can calculate halves and doubles of decimals	
	I can identify multiples and factors	
	I can recall prime numbers up to 20	
	I can interpret negative numbers in context such as the temperature.	
	I can recognise and use square numbers	

I can	Maths non - negotiables	Date
÷ x - +	I know by heart addition and subtraction facts up to 10,000	
	I can mentally add and subtract 5, 6 digit numbers with 2, 3 digit numbers	
	I can mentally add and subtract a 5,6 -digit number with multiples of 10	
	I can mentally add and subtract a 6,7 digit number and hundreds	
	I can mentally add and subtract with increasingly large numbers	
	I know by heart all multiplication and division facts up to 12x12	
	I can use rounding to check answers to calculations and determine, in problems the level of accuracy	
	I can multiply and divide whole numbers (4 digits) and decimals by 10,100,1000	
	I know the divisibility rules of 2,5,10,3,6,9 times tables	
	I can use efficient written methods to multiply a four digit number by a one/two	

	digit number	
	I can use mental strategies to multiply a 4/5 digit hundreds number with a one digit number e.g. 30000 x 5	
	I can identify multiples and factors including common factors of numbers	
	I can recall prime numbers up to 50	
	I can identify prime factors	
	I can identify square numbers and cube numbers	
	I can divide numbers up to 4/5 digits by one digit using short division including remainders	
	I can divide decimal numbers by one digit using short division	
	I can divide whole numbers (4/5 digits) by one digit and write the answer as a decimal	
	I can use long multiplication and long division using 4 digit and 2 digits	
	I can solve multistep problems involving 2 different operations deciding which operation to use and why	
	I can balance different equations where the = sign is placed in different places	

I can	Maths non - negotiables	Date
Fractions	I can count up and down in hundredths, thousandths	
	I can explain that a whole number can be written as fraction.	
	I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	
	I can recognise mixed numbers and improper fractions and convert them from one to another	
	I can find equivalent fractions and simplify fractions to its lowest terms	
	I can multiply a proper fraction by 10.	
	I can multiply a mixed number by 10.	
	I can read and write decimal numbers as fractions e.g. 0.7 = $^{7}/_{10}$ up to one decimal place.	
	I can add and subtract fractions with the same denominator and denominators that are multiples of the same number	
	I can calculate the equivalent decimal of any tenths and hundredths number.	
	I can solve problems including addition and subtraction of fractions	
	I can solve problems using decimal numbers up to 2 decimal places involving money, time	
	I can recognise the equivalent fraction to a decimal, $\frac{1}{2}$ = 0.5, $\frac{1}{4}$ = 0.25, 1/10 = 0.1, $\frac{3}{4}$ = 0.75, 1/5 = 0.2, 1/3 = 0,33	
	I can recognise and understand the percent symbol (%).	
	I know fraction, decimal and percentage equivalents e.g $\frac{3}{4}$ = 0.75 = 75%	
	I can write percentages as a fraction with denominator hundred, and as a decimal.	

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Measures	I can convert between different units of measure (km/m; m/cm; cm/mm; kg/g; l/ml).	
	I can read accurately scales when measuring capacity	
	I can read accurately scales on weighing measures	
	I can solve problems involving addition and subtraction of units of measure using decimal notation.	
	I can solve problems involving converting between units of time.	
	I can recognise and estimate volume using cubes and capacity using water.	
	I can calculate and compare the area of rectangles	
	I can measure and calculate the perimeter of compound shapes	
	I can estimate the area of irregular shapes	
	I can tell the time using Roman numerals	
	I can solve problems involving converting between units of measure or time	
	I can add amounts up to £1000.00 and give change.	
	I can convert between 112 hour and 24 hour clock	
	I can solve time problems: school timetable, cooking, races, airport timetables	

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Shape	I can classify 2D and 3D shapes according to different properties	
	I can identify 3-D shapes, including cubes and cuboids, from 2-D representations.	
	I can draw angles to the nearest 10 degrees using a protractor.	
	I can estimate the type of angle using knowledge of terms acute, right angle, obtuse and reflex	
	I can measure angles using a protractor to the neatest 5 degrees	
	I can describe the properties of equilateral, isosceles, right angle and scalene triangles.	
	I can describe positions on a 2-D grid as co-ordinates using four quadrants.	
	I can plot specified points and draw sides to complete a given polygon on a four quadrant	
	I can identify, describe and represent the position of a shape following a translation in a 2 quadrant	
	I can identify, describe and represent the position of a shape following a reflection in a 2 quadrant	
	I can use my knowledge of degrees in a triangle to find a missing angle	
	I can identify missing angles at a point	
	I can distinguish between regular and irregular polygon based on reasoning about equal sides and angles	
	I can use the properties of rectangles to deduce related facts and find missing lengths and angles	