YEAR 5 Maths Long Term Plan Overview

Place Value

- I can interpret negative numbers in context
- I can count forwards and backwards in steps of powers of 10 for any given number up to 1,000,000
- I can round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000
- I can read write order and compare numbers to 1 000 000 (1 million) and determine the value of each digit

Properties of Number

- I can work out if a number up to 100 is a prime number and have quick recall of all the prime numbers to 19
- I know divisibility tests for 2, 3, 4, 5, 6 and 9 and 25
- I can find all factor pairs of a number and common factors of two numbers
- I can recognise squared and cubed numbers and use the correct notation

Addition

- 5A.4 - I can add a mix of whole numbers and decimals with different numbers of decimal places using column addition
- 5A.3 - I can add decimals which are near multiples of 1 or 10 including money (e.g. 6.34+1.99)
- 5A.2 - I can add to the next 10 from a decimal number (e.g. 13.6+6.4=20)
- 5A.1 - I know number bonds to 1 and the next whole number

Subtraction

- 5S.4 - I can use efficient written subtraction with a mix of whole numbers and decimals with different numbers of decimal places using column subtraction
- 5S.3 - I can efficient written subtraction with upto 5 digits using efficient column subtraction
- 5S.2 - I can use the best mental calculation to subtract 1-, 2-, 3- and 4 digit numbers
- 5S.1 - I can takeaway numbers which are near multiples of 1 or 10, including money (e.g. 6.34 - 1.99)

Multiplication

- 5M.7 - I can use the 'ladder' method to multiply 3 and 4 digit numbers by a teen number (long multiplication)
- 5M.6 - I can use short multiplication to multiply a 1-digit number by a number with upto 4 digits and money
- 5M.5 - I can use partitioning 1 place decimals and multiply by 1-digit numbers (e.g. 6.3x7)
- 5M.4 - I can double amounts of money by partitioning (e.g. double £37.45)
- 5M.3 - I can multiply mentally by near multiples of 10 (e.g. 19x34 as (20x34)-34)
- 5M.2 - I can use number facts to make mental multiplication easier e.g. 43x6 is double 43x3 e.g 28 x 50 is 1/2 of 28 x 100 = 1400
- 5M.1 - I can use related multiplication facts to multiply 1 place decimals e.g. 7 x 6 = 42 so 7x0.6=4.2

Division

- 5D.6 - I can solve more complex problems involving division including with remainders and round the answer appropriately in context
- 5D.5 - I can use short division to divide a number with up to 4 digits by 12 or less.
- 5D.4 - I can begin to represent a remainder as a fraction or decimal
- 5D.3 - I can divide by larger numbers mentally by subtracting the 10th or 100th multiple as appropriate
- 5D.2 - I can halve amounts of money e.g. half of £52.40 is £26.20
- 5D.1 - I can divide whole numbers by 10, 100, 1000, 10000 to give whole number answers or answers with 1, 2 or 3 decimal places

Fractions

- I can multiply proper fractions and mixed numbers by a whole number using diagrams and concrete apparatus
- I can add and subtract fractions with denominators that are multiples of the same number
- I can compare and order fractions where denominators are all multiples of the same number
- I can simplify fractions using common factors
- I can add and subtract fractions with the same denominators including recognising and converting improper fractions to mixed numbers
- I can recognise and convert improper fractions to mixed numbers

Problem Solving

- I can investigate a problem involving place value and properties of number, and present my investigation in a clear and organised way
- I can solve problems with numbers up to 3 decimal places
- I can use all 4 operations to solve equivalence statements (e.g. 5 x ? = 18 + 12)
- I can solve multi step problems involving a combination of any of the 4 operations
- I can solve problems involving multiplication and division including scaling by simple fractions
- I can solve division problems interpreting remainders in a context and adjusting the answer appropriately
- I can use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling
- I can use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Position and Direction

- I can identify, describe and draw the position of a shape on a grid after a translation
- I can identify, describe and draw the position of a shape on a grid after a reflection on a line parallel to the axis

Percentages and Ratio

- I can recognise and understand % as part of 100 and write a % as a fraction and a decimal including 1/2, 1/4, 1/5, 2/5 and fractions with a denominator with a multiple of 10 or 25

Statistics

- I can decide which representations of data are most appropriate and explain why
- I can complete, read and interpret information presented in tables, including timetables
- I can solve problems using information presented in line graphs

Perimeter and Area

- I can find unknown lengths on rectilinear shapes using my understanding of perimeter and area
- Express algebraically: A rectangle with sides of 2cm and b cm and a perimeter of 20cm can be expressed as 4 + 2b =20
- I can estimate the area of irregular shapes
- I can measure and calculate the area of shapes that need to be divided into rectangles (composite rectilinear shapes) in cm² and m²
- I can measure and calculate the perimeter of shapes that need to be divided into rectangles (composite rectilinear shapes) in cm and m

Decimals

- I can read, write, order and compare numbers that have a mixture of 1, 2 or 3 decimal places
- I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- 30/1000 = 0.03 = 3/100
- I can round decimals with 2 decimal places to the nearest whole number and to one decimal place

Shape

- I can find missing lengths and angles in rectangles using my knowledge of related facts
- I can calculate missing angles on a straight line (180°) or at a point (360°) or within a right angle (90°)
- I can identify 3D shapes from 2D representations
- I can identify regular and irregular shapes using my knowledge of length of sides and angles
- I can draw and measure given angles in degrees

Measurement

- I can understand and use approximate equivalences between metric units and common imperial units (Inches, pounds, pints)
- I can estimate volume and capacity and explore these concepts using practical materials
- I can use all 4 operations to solve problems involving length, mass, capacity and scaling
- I can convert between different units of measure using my understanding of times and divide by 10, 100 and 1000

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