



FRONT STREET PRIMARY SCHOOL – MATHS OVERVIEW – YEAR GROUP: 6



Layered objectives (taught within other topics and also within other foundation subjects and curriculum areas):

- Solve number and practical problems that involve all of the above.
- Solve addition and subtraction multi-step problems in contexts deciding operations/methods and why.
- Solve problems involving addition, subtraction multiplication and division.
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
- Use formulae in science
- Interpret and construct pie charts and line graphs and use these to solve problems.

Continually Revisited Objectives (Hi3/Maths Blast, Fluency Friday) :

- Perform mental calculations including with mixed operations and large numbers.
- Identify common factors, common multiples and primes.
- Read, write order and compare numbers to 10,000,000 and determine the value of each digit. Use $<$ $>$ $=$
- Round a whole number to a required degree of accuracy.
- Use estimation to predict and check.
- Use negative numbers in context, and calculate intervals across zero.
- Use all multiplication tables to calculate mathematical statements.
- Continue to use Roman Numerals to 1000(M) years
- Use knowledge of the order of operations $+$ $-$ \times and \div .
- Identify the value of each digit in numbers given to 3DP and divide by 10, 100, 1000.
- Recall equivalences between simple FDPs.
- Relate fractions and division by multiplying e.g. if $\frac{1}{4}$ of a rope is 36cm then the whole is $36\text{cm} \times 4 = 144\text{cm}$
- Calculate with fractions
- Divide decimals by one digit and check inverse (use measures and money).
- Use simple formulae
- Generalisations of number patterns
- Number puzzles
- Use, read, write and convert between standard units converting measurements of length, mass, volume and time. Use decimal notation (3DP)
- Convert between miles and KM
- Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.
- Name parts of circles (radius, diameter, circumference).
- Recognise angles where they meet at a point, are on a straight line or are vertically opposite and find missing angles.
- Calculate and interpret the mean as an average

Autumn Focus (taught discretely):

NUMBER AND PLACE VALUE

- Read, write order and compare numbers to 10,000,000 and determine the value of each digit.
- Identify the value of each digit in numbers given to 3DP and divide by 10, 100, 1000.
- Round any whole number to a required degree of accuracy.
- Use negative numbers in context, and calculate intervals across zero.

NUMBER $+$ $-$ \times and \div

- Multiply upto ThHTO \times TO using formal method of long mult.
- Divide ThHTO by TO using long division and show remainders as whole number, fraction, or rounding.
- Divide ThHTO by TO using short division.
- Multiply one digit numbers with upto 2DP by whole numbers
- Use written division methods where answers have 2DPs.

Spring Focus:

NUMBER – FRACTIONS

- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
- Compare and order fractions, including fractions >1
- Add and subtract fractions with different denominators and mixed numbers.
- Multiply simple pairs of proper fractions and answer in simplest form.
- Divide proper fractions by whole numbers.
- Associate a fraction with division and calculate decimal fraction equivalents

RATIO AND PROPORTION

- Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.
- Solve problems involving the calculation of percentages and the use of percentages for comparison.
- Solve problems involving similar

Summer Focus:

ALGEBRA

- Use simple formulae
- Generate and describe linear sequences
- Express missing number problems algebraically
- Fine pairs of numbers that satisfy an equation with unknowns
- Enumerate possibilities of combinations of two variables.
- Missing numbers, lengths coordinates and angles

MEASURE

- Solve problems involving the calculation and conversion of units of measure (3DP)
- Use, read, write and convert between standard units converting measurements of length, mass, volume and time. Use decimal notation (3DP)
- Recognise that shapes with same area can have different perimeter.
- Recognise when possible to use formulae for area and volume of shapes.



shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions & multiples.

- Recognise proportionality in contexts (shape and recipes)
- Pupils link percentages or 360 to calculating angles of pie charts.
- Solve problems using unequal quantities 3/5 of class are boys.

- Calculate the area of parallelograms and triangles.
- Calculate, estimate and compare volume of cubes and cuboids using standard units including cubic centimetres (cm^3) and cubic metres (m^3) and extend to other units.

GEOMETRY - shapes

- Draw 2D shapes using given dimensions and angles
- Recognise and describe and build simple 3D shapes, including making nets.
- Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.
- Illustrate/name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
- Recognise angles where they meet at a point, are on a straight line or are vertically opposite and find missing angles.

GEOMETRY – position & direction

- Draw positions on the full coordinate grid (4 quadrants)
- Draw/translate simple shapes on the coordinate plane and reflect them in the axes.
- Draw/label quadrilaterals and triangles in 4 quadrants.
- Connect work on angles, FDPs to pie charts.



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