FRONT STREET PRIMARY SCHOOL – MATHS OVERVIEW – YEAR GROUP: 4

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

- **Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.**
- *Collect, represent and interpret statistical data. Pose and answer questions using different graphs charts and tables.*
- *Understand and use Venn and Carroll diagrams(shape)*
- **Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.**
- **Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.**

Autumn Focus (taught discretely):

NUMBER AND PLACE VALUE

- **Count** *forwards and back in steps of* 10, 100 *from any given number.*
- *Read, write,* **order and compare numbers beyond 1000.**
- **Recognise the place value of each digit in Th, H, T O**
- *Use the vocabulary of comparing and ordering numbers including use of >, < symbols and = sign.*
- **Identify, represent and estimate numbers using different representations** including measures.
- **Read Roman numerals to 100 (I to C)**
- **Round any number to the nearest 10, 100 or 1000.**

NUMBER + - x and ÷

- Continue to practice mental methods e.g. *Use place value and known facts to add or subtract one near multiple of 100 from another e.g. 602* – 498 or 535 + 399.
- **Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.**
- **Add and subtract fractions with the same denominator** practising through increasingly complex problems beyond one whole
- **Estimate and use inverse operations to check answers to a calculation.**
- *Understand arithmetic laws; commutative, associative and distributive.*

Spring Focus:

NUMBER x and ÷

- **Recall multiplication and division facts for multiplication tables up to 12 x 12.**
- *Relate multiplication and division to arrays and explore partitioning arrays in different ways to show relationships between number facts.*
- **Use place value, known and derived facts to multiply and divide mentally** (e.g. 600 ÷ 3 = 200 can be derived from 2 x 3 = 6) **, including multiplying by 0 and 1; dividing by 1; multiplying together three numbers.**
- **Recognise and use factor pairs and commutativity in mental calculations.**
- **Multiply TO and HTO by a O using formal written layout** of short multiplication.
- Use the formal written method of short division *TO and HTO ÷ O (no remainder)*
- Write statements about the equality of expressions e.g. using the distributive law 39 x 7 = 30 x 7 + 9 x 7 and the associative law (2 x 3) x 4 = 2 x (3 x 4).
- Combine knowledge of number facts and rules of arithmetic to solve mental and written calculations e.g. 2 x 6 x 5 = 10 x 6 = 60.
- **Solve** one and two step **problems** in contexts **involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects**

Summer Focus:

GEOMETRY – shapes

- *Identify, make, draw and describe 2-D and 3-D shapes.*
- *Use parallel and perpendicular*
- **Compare and classify geometric shapes, including quadrilaterals** e.g. parallelogram, rhombus, trapezium **and triangles** e.g. isosceles**,** equilateral, scalene**, based on their properties and size**
- **Identify acute and obtuse angles and compare and order angles up to two right angles by size.**
- **Identify lines of symmetry in 2-D shapes presented in different orientations.**
- **Complete a simple symmetric figure with respect to a specific line of symmetry.**

GEOMETRY – position & direction

- Read, write and use pairs of coordinates to **describe positions on a 2-D grid as coordinates in the first quadrant.**
- **Describe movements between positions as translations of a given unit to the left/right and up/down.**
- **Plot specified points and draw sides to complete given polygon**

MEASURE

- *Use read and write metric units.*
- *Suggest suitable units and equipment for measuring and read scales to an appropriate degree of accuracy.*

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

- *Continue to* **count in** *and recognise known multiples, extend to* **multiples of 6, 7, 9, 25 and 1000.**
- *Recognise patterns in sequences of multiples and connections between them e.g. explore patterns on a 12 x 12 multiplication grid.*
- *Use the vocabulary: factor, multiples, common factors and multiples (fractions link).*
- *Recognise and extend number sequences - extending beyond zero when counting back.*
- *Interpret negative numbers in context and* **count backwards through zero to include negative numbers.**
- **Find 1000 more or less .**
- **Recognise the place value of each digit in Th, H, T O**
- *Use the vocabulary of comparing and ordering numbers including use of >, < symbols and = sign.*
- **Round any number to the nearest 10, 100 or 1000.**
- *Apply understanding of the number system to* **solve number and practical problems** *and puzzles involving* **increasingly large positive numbers***, money or measures. Explain methods*
- Use and explain the equals sign to indicate equivalence
- *Solve calculation problems using information from a range of tables and charts.*
- **Count up and down in** tenths and **hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.**
- Count forwards and back using simple fractions and decimals.
- **Recognise and write decimal equivalents to ¼, ½, ¾ .**
- **Recognise and write decimal equivalents of any number of tenths or hundredths.**
- **Add and subtract fractions with the same denominator**
- *Recognise and use the eight compass directions*

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• **Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.** • *Solve calculation problems including using information from a range of tables and charts*	e.g. the number of choices on a menu or three cakes shared equally between 10 children. **NUMBER – FRACTIONS** • *Compare and order fractions.* • Extend use of the number line to connect fractions, numbers and measures. • **Find the effect of dividing a O or TO number by 10 and 100, identifying the value of the digits in the answer as ones , tenths and hundredths.** • **Round decimals with 1DP to nearest whole number.** • **Compare** and order **numbers and** quantities **with the same number of decimal places up to 2DPs.** • **Recognise and show, using diagrams, families of common equivalent fractions.** • Use factors and multiples to recognise equivalent fractions and simplify where appropriate e.g. 6/9 = 2/3 or ¼ = 2/8. • Extend use of the number line to connect fractions, numbers and measures. • Count forwards and back using simple fractions and decimals. • **Recognise and write decimal equivalents to ¼, ½, ¾ .** • **Recognise and write decimal equivalents of any number of tenths or hundredths.** • **Solve simple measure and money problems involving fractions and decimals to two decimal places.** • **Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non unit fractions where the answer is a whole number.** • **Add and subtract fractions with the same denominator** practising through	• **Measure and calculate the perimeter of a rectilinear figure, including squares, in centimetres and metres.** • **Find the area of rectilinear shapes by counting squares.** • Relate area to arrays and multiplication. • **Estimate, compare,** *order* **and calculate different measures, including money in pounds and pence** building on understanding of place value, decimal notation *and knowledge of fractions.* • **Convert between units of measure e.g. kilometre to metre; hour to minute** using multiplication. • *Continue to develop accuracy with telling the time and using the vocabulary of time. Compare durations of events including when expressed in different units e.g. 3.5 hours and 140 minutes.* • **Read, write and convert time between analogue and digital 12- and 24-hour clocks.** • **Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.** • **Convert between units of measure e.g. kilometre to metre; hour to minute** using multiplication. • **Measure and calculate the perimeter of a rectilinear figure, including squares, in centimetres and metres.** • Express perimeter algebraically as 2 (a + b) where a and b are dimensions in the same unit. • **Find the area of rectilinear shapes by counting squares.**	

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	increasingly complex problems beyond one whole. • Extend understanding of the number system and decimal place value to tenths and hundredths and relate this to decimal measure. • Understand decimals and fractions are different ways of expressing numbers and proportions. • **Count up and down in** tenths and **hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.** • **Compare** and order **numbers and** quantities **with the same number of decimal places up to two decimal places** and represent them in several ways, such as on number lines.		