FRONT STREET PRIMARY SCHOOL – MATHS OVERVIEW – YEAR GROUP: 3

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

- **Interpret and present data using bar charts, pictograms and tables** in different contexts.
- Understand and use simple scales e.g. 2, 5, 10 units per cm in pictograms and bar charts with increasing accuracy.
- **Solve one and two-step questions e.g. 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.**
- *Pose and answer own questions using different bar charts pictograms and tables.*
- *Understand and use Venn and Carroll diagrams (shapes)*
- *Collect, represent and interpre3tstatictaical data across the curriculum.*

Autumn Focus (taught discretely):

NUMBER AND PLACE VALUE

- Continue to count in 1s, 10 and 100s *from any number to 1000,* (Including measures)
- **Read and write, compare and order numbers up to 1000 in numerals and words.**
- Become fluent in the order and place value of numbers to 1000
- *Use the vocabulary of comparing and ordering numbers use of >, < symbols and = sign.*
- **Recognise the place value of each digit in HTO.** *e.g. 146 as 100 + 40 + 6 and as 1 hundred, 4 tens, 6 ones.*
- Apply partitioning e.g. 146 = 100 + 40 + 6 and 146 = 130 + 16.
- *Round any number to nearest 10 or 100.*

NUMBER + -

- **Add and subtract numbers mentally including:**
- **HTO – O, HTO – T, HTO – H.**
- addition and subtraction of two digit numbers including additions with answers exceeding 100.
- **Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.**
- **Estimate answers to calculations and use inverse to check.**

Spring Focus:

NUMBER x and ÷

- **Recall and use multiplication and division facts for the 3, 4 and 8s.**
- Continue to practice 2, 5 and 10 tables.
- Connect the 2, 4 and 8 multiplication tables through doubling.
- Develop efficient mental methods for example using commutativity and associativity e.g. 4 x 12 x 5 = 20 x 12 = 240 and multiplication and division facts e.g. using 3 x 2 = 6, 6 ÷ 3 = 2 and 2 = 6 ÷ 3 = 2 to derive related facts such as 30 x 2 = 60, 60 ÷ 3 = 20 and 20 = 60 ÷ 3.
- **Write and calculate mathematical statements for x and ÷ using the multiplication tables that are known, including for TO x O, using mental and progressing to formal written methods.**
- **Solve problems, including missing number problems, involving multiplications and division,** including measuring contexts and **positive integer scaling problems** (e.g. four times as high, 8 times as long) **and correspondence problems in which n objects are connected to m objects** (e.g. 3 hats and 4 coats, how many different outfits, 4 cakes shared equally between 8 children).
- *Use rounding, estimation and inverse operations to check answer*

Summer Focus:

MEASURE

- Measure using appropriate tools and units.
- **Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g): volume/ capacity (l/ml),** including comparing and using mixed units e.g. 1kg and 200g
- simple equivalents of mixed units e.g. 5m = 500cm.
- **Add and subtract amounts of money to give change, using both £ and p in practical contexts.**
- **Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and the 12-hour and 24-hour clocks.**
- Use the digital 12 hour clock.
- *Use all four operations to solve problems including scaling problems involving measure*
- **Measure the perimeter of simple 2-D shapes.**
- **Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./ p.m., morning, afternoon, noon and midnight.**
- **Compare duration of events e.g. the time taken by a particular event**

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

- Continue to use multiples of 2, 3, 5 and 10.
- **Count from 0 in multiples of 4, 8, 50 and 100**
- **Find 10 or 100 more or less than a given number**
- *Recognise patterns in sequences of multiples and connections between them e.g. explore patterns on a 12 x 12 multiplication grid.*
- *Recognise and extend number sequences formed by counting from any number in steps of constant size.*
- *Apply understanding of number properties to solve routine and non-routine problems and puzzles involving numbers, money or measure*
- **Solve number and practical problems** *and puzzles involving numbers, money or measures. Explain methods and reasoning orally and in writing, including using diagrams and symbol.*
- **Identify, represent and estimate numbers using different representations.**
- **Recognise the place value of each digit in HTO.**
- *Round any number to nearest 10 or 100.*
- *practice recall of addition and subtraction facts to 20; use these known facts and understanding of place value to quickly derive sums and differences using two-digit numbers.*
- **Estimate the answer to a calculation and use inverse operations to check answers.**
- **Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.**
- Use and explain the equals sign to indicate equivalence
- **Recall and use multiplication and division facts for 3, 4 and 8s.**
- Continue to practice 2, 5 and 10 tables.
- Connect the 2, 4 and 8 multiplication tables through doubling.
- **Count up and down in** *fractions including* **tenths.**
- **Add and subtract fractions with the same denominator within one whole e.g. 5/7 + 1/7 = 6/7.**
- Become fluent in recognising the value of coins;
- **Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and the 12-hour and 24-hour clocks.**
- Use the digital 12 hour clock.
- **Know the number of seconds in a minute and the number of days in each month, a year and leap year.**

FRONT STREET PRIMARY SCHOOL – MATHS OVERVIEW – YEAR GROUP: 3

• *Understand commutative/associative addition.* • **Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.** • Use and explain the equals sign to indicate equivalence • *Solve calculation problems using information from a range of tables and charts.*	**NUMBER – FRACTIONS AND DECIMALS** • Continue to recognise fractions in the context of parts of a whole, numbers, measurements, a shape, and unit fractions as a division of a quantity. • **Recognize, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.** • Understand the relation between unit fractions as operators (fractions of), and division by integers. • **Recognize and use fractions as numbers: unit fractions and non-unit fractions with small denominators.** • Use them on a number line and deduce relations between them such as size and equivalence. Go beyond the 0 – 1 interval, including relating this to measure. • **Compare and order unit fractions, and fractions with the same denominators.** • **Recognise and show, using diagrams, equivalent fractions with small denominators.** • *Apply understanding of fractions to* **solve** *routine and non-routine* **problems** *and puzzles involving numbers, shapes, money or measures. Explain methods and reasoning orally and in writing, including using diagrams and symbols* • **Add and subtract fractions with the same denominator within one whole e.g. 5/7 + 1/7 = 6/7.** • **Count up and down in** *fractions including* **tenths.** • **Recognise that tenths arise from dividing an object into ten equal parts and in dividing one-digit numbers or quantities by 10,** connecting them to place value, decimal measures and division by 10.	**or task.** **GEOMETRY - shapes** • *Use parallel and perpendicular to* describe, *identify, compare and sort* 2-D and 3-D shape. • Descriptions include length of lines and acute and obtuse angles. • Extend knowledge of the properties of shapes to symmetrical and non-symmetrical polygons and polyhedra. • **Draw 2-D shapes and make 3-D shapes using modelling materials (**connect decimals and rounding to drawing and measuring straight lines in centimetres in a variety of contexts)**;** • **Recognise 3-D shapes in different orientations and describe them.** • **Recognise angles as a property of shape or a description of turn.** • **Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater or less than a right angle** and use the language of acute and obtuse. • **Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.** • *Solve problems, involving reasoning about shapes and their properties.* **GEOMETRY – position & direction** • *Use mathematical language to describe position, direction and movement including movement in a straight line and quarter, half, three quarter and full turns both clockwise and anti-clockwise.* • *Recognise and use the four compass directions N, E, S, W.*	