

**Grange Primary School**  
**Year 3 Maths Curriculum Coverage**

**Autumn**

**Chapter 1 – Numbers to 1000**

To learn to count in 100s and understand the place value. Pupils will also understand how many 100s are needed to make a 1000.

To compose and decompose numbers consisting of 100s, 10s and 1s.

To understand the value of each digit in a 3-digit number. .

To be able to compare and order numbers.

To be able to count in 50s

To recognise, describe and continue a number pattern.

To be able to recognise, describe and complete more complicated number patterns.

To be able to count in 4s and 8s.

Use problem solving skills.

**Chapter 2 – Addition and Subtraction**

To understand commutative law of addition and the corresponding addition and subtraction facts.

To understand simple addition where only the ones column will be affected.

To add multiples of 10 to a 3-digit number.

To add multiples of 100s to a 3-digit number.

To add two 3-digit numbers.

To add numbers and rename 1s.

To add with renaming in 10s.

To add two 3-digit numbers with renaming the 1s.

To add two 2-digit numbers with renaming the 10s.

To add with renaming in 1s and 10s. Contributor

To do simple subtraction by taking away a single-digit number from a 2-digit number without renaming.

To do simple subtraction by taking away a single-digit number from a 3-digit number without renaming.

To subtract multiples of 10, up to 90, from a 3-digit number.

To subtract hundreds from a 3-digit number and to subtract multiples of 1 and 10 from a 3-digit number.

To understand simple subtraction of a 3-digit number by another 3-digit number with no renaming.

To subtract with renaming in 10s and 1s.

To subtract with renaming 100s.

To subtract with regrouping tens and hundreds.

To subtract a 3-digit number with zeros.

To solve addition and subtraction problems using the Bar Model.

To use the Bar Model to solve problems.

To solve complicated problems involving addition and subtraction.

To solve more complicated problems involving addition and subtraction.

To solve problems using addition and subtraction and use the model to represent a problem.

**Chapter 3 – Multiplication and Division**

To multiply by 3.

To multiply by 4.

To multiply by 4 and 8.

To divide by 3.

To divide by 4.

To find relationships between multiplication and division.

To divide by 4 and 8.

To solve word problems with multiplication.

To solve word problems that involve division.

To solve more word problems involving multiplication and division.

To solve problems.

To solve problems using multiplication and division.

**Chapter 4 – Further Multiplication and Division**

To multiply multiples of 10 by a 1-digit number.

To multiply any 2-digit number by a single-digit number.

To multiply more 2-digit numbers.

To multiply with regrouping.

- To multiply with regrouping.
- To understand simple division of a 2-digit number by a 1-digit number.
- To divide where there is a need to regroup.
- To use long division to divide.
- To solve word problems that involve multiplication.
- To solve word problems involving division.
- To solve more challenging word problems.
- To solve complex word problems. Create word problems.

#### **Chapter 5 – Length**

- To use metres and centimetres to measure objects.
- To write length in centimetres only by converting metres to centimetres.
- To convert kilometres to metres.
- To convert length from metres to km and m.
- To compare two lengths.
- To solve measurement-related word problems.
- Solving other word problems.
- To solve word problems further, involving multiplication.
- To solve word problems associated with length using division.
- To solve more challenging word problems.
- To create and solve word problems.

#### **Chapter 6 – Mass**

- To measure mass using weighing scales and compare the mass of objects using g and kg.
- To use weighing scales to measure mass when the mass is between multiples of 100 g.
- To read values on a scale which are 1 kg or more.
- To weigh heavier items where the units in the scales represent 200g each.
- To solve word problems relating to mass with addition and subtraction.
- To solve word problems relating to mass using multiplication.
- To solve word problems relating to mass using division.
- To be able to work out the value of each small marking on a scale and to estimate the mass of objects.

### **Spring**

#### **Chapter 7 – Volume**

- To measure volume in millilitres.
- To measure capacity in millilitres.
- To measure volume using millilitres and litres.
- To measure volume in millilitres and litres from a "homemade" bottle with markings.
- To measure volume using ml and litres in comparison to 1 l.
- To measure larger capacity in litres and millilitres.
- To solve basic word problems related to volume.
- To solve more word problems.
- To solve word problems through division.
- To solve two-step word problems.
- To achieve a higher-level understanding of volume.

#### **Chapter 8 – Money**

- To consolidate previous learning about denominations of both notes and coins; to use simple addition to count amounts of money.
- To name amounts of money including coins above 100p; to regroup and rename 100p as £1 as a key strategy.
- To find multiple ways of showing an amount of money.
- To add money by adding together the pounds and pence separately.
- To add amounts of money together using different methods; to consolidate the addition of pounds and pence separately.
- To consolidate 'making a pound' as a strategy for adding amounts of money where the coins equal more than 99p.
- To learn the 'make a pound' strategy with number bond diagrams; to consolidate the strategies associated with the addition of money.
- To use multiple methods for subtracting amounts of money, including concrete materials and the column method.
- To use visual comparison to subtract amounts of money; to consolidate column subtraction where there is no regrouping of pence required.
- To use number bonds to subtract amounts of money; to develop number sense through decision making.

To use number bonds as the primary strategy for subtracting amounts of money; to split pounds and pence simultaneously when subtracting amounts of money.

To learn the counting on strategy for calculating change; to consolidate the number bonds strategy for calculating change.

To solve word problems involving money using bar modelling as the key strategy; to learn comparative models where pupils are solving by seeing the smaller amount inside of the larger amount.

To use part-whole bar models to represent word problems; to apply addition and subtraction strategies to solve word problems.

### **Chapter 9 – Time**

To use the terms 'am' and 'pm' correctly to identify morning or afternoon/evening

To learn to tell time to the minute; to understand the relationship between the minute hand and hour hand

To consolidate and apply a variety of vocabulary used to express the time

To compare analogue and digital time; to represent time using both analogue and digital methods.

To tell time before the hour using the hour and minute hands

To learn to tell time using 24-hour notation; to use analogue time and 24-hour notation interchangeably.

To tell the time on an analogue clock using Roman numerals.

To measure time in seconds and milliseconds.

To measure time in seconds using a stopwatch; to consolidate previous learning about seconds.

To consolidate measuring time in seconds; to conduct a time experiment using seconds.

To measure time in hours using an analogue clock.

To consolidate the measurement of time in hours.

To measure time in hours using analogue clocks and timelines; to count backwards in time by the hour.

To measure the passage of time in minutes using an analogue clock and timeline.

To measure time to the minute when it crosses into the next hour; to use number bonds to calculate the passage of time.

To measure time in minutes, counting backwards to determine the starting point; to use number bonds and timelines to calculate the passage of time.

To determine how many seconds are in a minute; to use multiplication to calculate the number of seconds in a number of minutes.

To convert seconds into minutes using number bonds.

To calculate the number of days in a month; to learn which months have 31, 30 and 28/29 days.

To find the duration of days for different activities.

### **Chapter 10 – Picture Graphs and Bar Graphs**

To construct picture graphs from a set of data; to present data with pictures that represent more than 1 item.

To construct bar graphs from a set of data; to use proportion to reflect precise difference in quantity.

To read and interpret information from a bar graph; to use and understand vocabulary related to bar graphs.

To read bar graphs where the scale is not a multiple of all quantities measured.

To read bar graphs where the scale is made up of larger increments.

### **Summer**

#### **Chapter 11 – Fractions**

To count in tenths; to recognise tenths and be able to determine how many tenths are shaded

To make number pairs to create 1; to have fractions combine to make 1.

To add fractions with the same denominator.

To consolidate adding fractions with the same name; to learn how fractions can add to 1.

To subtract fractions with the same name.

To find equivalent fractions through paper folding and shading.

To find equivalent fractions using paper folding and shading.

To find equivalent fractions; to place fractions on a number line.

To find fractions equivalent to 1 half; use pictorial representations and multiplication to show equivalence.

To find equivalent fractions using concrete objects and pictorial representations.

To find equivalent fractions using pictorial representations and multiplication.

To find the simplest fraction using visualisation and concrete materials.

To find the simplest fraction using pictorial representations and division.

To find equivalent fractions using multiplication and division; to determine when a fraction is equivalent or not.

To compare the fractions 1 half and 1 quarter using pictorial representations and concrete materials.

To compare fractions using pictorial representations; to understand the numerical nature of the numerator.

To compare fractions with different names (denominators) using pictorial representations and number lines.

To add fractions using pictorial representations; to simplify fractions after adding them.

To subtract fractions using pictorial representations; to simplify fractions after they have been subtracted.  
To subtract fractions from a whole amount; to use pictorial representations of whole numbers to help subtract fractions.  
To determine a fraction of a whole number using pictorial representations.  
To find a fraction of a whole number using pictorial representations, multiplication and concrete objects.  
To consolidate finding the fraction of a whole number.  
To divide 1 between more than 1; to share 1 whole equally between more than 1.  
To share more than 1 using pictorial representations and division.  
To share more than 1; to recognise a whole and its parts using pictures and number lines.  
To show more than 1 whole after sharing a number of items equally; to use pictorial representations to share whole items equally.  
To apply bar modelling to represent fractions in word problems; to solve word problems using pictorial representations and abstract methods.  
Use bar models to solve word problems involving the fraction  $\frac{1}{2}$ .  
Use bar models to solve word problems involving the fractions  $\frac{1}{3}$  and  $\frac{1}{5}$ .

#### **Chapter 12 – Angles**

To learn what makes up an angle and identify angles in objects.  
To see angles on the inside and outside of objects; to find angles in letters.  
To find angles in shapes; to determine the relationship between the number of angles in a shape and the number of sides.  
To find right angles in everyday objects; to understand what makes a right angle.  
To compare angles using the terms 'right' angle and 'acute' angle; to identify acute angles as smaller angles than right angles.  
To identify right angles and acute angles; to recognise and define an obtuse angle.  
To make turns using angles vocabulary; to align the language of angles and fractions to describe turns.

#### **Chapter 13 – Lines and Shapes**

To identify, define and create perpendicular lines; to find perpendicular lines in everyday objects.  
To identify, define and create parallel lines; to find parallel lines in everyday objects.  
To define and identify vertical and horizontal lines; to find vertical and horizontal lines in the real world.  
To describe 2-D shapes using familiar vocabulary about lines and angles.  
To draw 2-D shapes in proportion to their size; to identify how big a shape is.  
To create 3-D shapes out of nets; to use vocabulary related to 3-D shapes and their properties.  
To construct 3-D shapes out of clay and discuss their properties.  
To describe 3-D shapes using familiar terms; to identify properties of 3-D shapes.

#### **Chapter 14 – Perimeter of Figures**

To determine the perimeter of basic shapes; to use grid paper to measure the perimeter of a shape.  
To measure the perimeter of a shape using 1 cm grid paper.  
To determine the perimeter of different shapes; to create shapes with a specific perimeter.  
To find the perimeter of shapes using 2 cm grids; to identify mistakes in the thinking and working of others.  
To use a ruler to measure the length of the side of the shape in order to calculate the perimeter.  
To calculate the perimeter of a rectangle using multiplication and addition.  
To calculate the perimeter of a square using addition and multiplication; to calculate the perimeter of rectangles and irregular shapes by adding up the length of each side.  
To consolidate learning about perimeter using practical word problems; to calculate the perimeter of a rectangle using properties of shapes.  
To calculate the perimeter of a square and a rectangle using information previously learned about the properties of shapes.  
To calculate the perimeter of a rectangle when a square piece has been removed; to determine the lengths of sides that are not marked based on information about the piece removed.