Year 3 End of Unit Milestones:

Autumn Term – TEXTBOOK 3A
Chapter 1 Number and Place Value: Numbers to 1000

By the end of this unit, children will be able to:
- learn to count in hundreds and understand the place value. Pupils will also understand how many hundreds are needed to make 1000.
- compose and decompose numbers consisting of hundreds, tens and ones
- understand the value of each digit in a 3-digit number
- be able to compare and order numbers
- be able to count in fifties
- recognise, describe and continue a number pattern
- be able to recognise, describe and complete more complicated number patterns
- be able to count in fours and eights.

Autumn Term – TEXTBOOK 3A
Calculations: Addition and Subtraction
Chapter 2: Addition and Subtraction

By the end of this unit, children will be able to:
- understand the commutative law of addition and the corresponding addition and subtraction facts
- add a 3-digit number to a 1-digit number with no regrouping or renaming
- add a 3-digit number to a multiple of 10 (2-digit number) without regrouping or renaming
- add multiples of 100 to a 3-digit number. without regrouping or renaming
- add two 3-digit numbers without regrouping or renaming; introduction of the column method of addition
- add a 3-digit number to a 1-digit number, with renaming
- add with renaming in tens
- add two 3-digit numbers with renaming the ones
- add two 3-digit numbers with renaming the tens
- add with renaming in ones and tens
- do simple subtraction by taking away a 1-digit number from a 2-digit number without renaming
- do simple subtraction by taking away a 1-digit number from a 3-digit number without renaming
- subtract multiples of 10, up to 90, from a 3-digit number
- subtract hundreds from a 3-digit number and to subtract multiples of 1 and 10 from a 3-digit number
- understand simple subtraction of a 3-digit number by another 3-digit number using the column method
- subtract with renaming in tens and ones
- subtract with renaming hundreds
- subtract with regrouping tens and hundreds
- subtract a 3-digit number with zeros
- solve addition and subtraction problems using the bar model.

Autumn Term – TEXTBOOK 3A

Chapter 3: Calculation: Multiplication and Division

By the end of this unit, children will be able to:
- multiply by 3, 4 and 8.
- use commutative law to multiply
- divide by 3, 4 and 8.
- find relationships between multiplication and division.
- solve word problems with multiplication and division using the bar model.

Autumn Term – TEXTBOOK 3A

Chapter 4 Calculation: Further Multiplication and Division

By the end of this unit, children will be able to:
- multiply multiples of 10 by a 1-digit number
- multiply any 2-digit number by a 1-digit number
- multiply more 2-digit numbers with regrouping
- understand simple division of a 2-digit number by a 1-digit number
- divide where there is a need to regroup
- use long division to divide.

Spring Term – TEXTBOOK 3B

Chapter 11 Fractions, Decimals and Parentages: Fractions

By the end of this unit, children will be able to:
- count in tenths; to recognise tenths and be able to determine how many tenths are shaded
- make number pairs to create 1; to combine fractions to make 1
- add fractions with the same denominator
- consolidate adding fractions with the same name; to learn how fractions can add to 1
- subtract fractions with the same name
- find equivalent fractions through paper folding and shading
- find equivalent fractions using paper folding and shading
- find equivalent fractions; to place fractions on a number line
- find fractions equivalent to ½
- use pictorial representations and multiplication to show equivalence

- find equivalent fractions using concrete objects and pictorial representations and multiplication
- find the simplest fraction using visualisation and concrete materials, pictorial representations and division
- find equivalent fractions using multiplication and division; to determine whether or not a fraction is equivalent
- compare the fractions 1/2 and 1/4 using pictorial representations and concrete materials
- compare fractions using pictorial representations
- understand the numerical nature of the numerator
- compare fractions with different names (denominators) using pictorial representations and number lines
- add fractions using pictorial representations; to simplify fractions after adding them
- subtract fractions using pictorial representations and to simplify fractions after they have been subtracted
- subtract fractions from a whole amount; to use pictorial representations of whole numbers to help subtract fractions
- determine a fraction of a whole number using pictorial representations
- find a fraction of a whole number using pictorial representations, multiplication and concrete objects
- consolidate finding the fraction of a whole number
- divide 1 between more than 1; to share 1 whole equally between more than 1
- share more than 1 using pictorial representations and division
- recognise a whole and its parts using pictures and number lines.
- show more than 1 whole after sharing a number of items equally
- use pictorial representations to share whole items equally
- apply bar modelling to represent fractions in word problems; to solve word problems using pictorial representations and
- abstract methods.

Spring Term – TEXTBOOK 3A
Chapter 5 Measurement: Length

By the end of this unit, children will be able to:
- use metres and centimetres to measure objects
- write length in centimetres only by converting metres to centimetres
- convert kilometres to metres
- convert length from metres to kilometres and metres
- compare two lengths.

Autumn Term – TEXTBOOK 3A
Chapter 6 Measurement: Mass

By the end of this unit, children will be able to:
- measure mass using weighing scales and compare the mass of objects using grams and kilograms
- use weighing scales to measure mass when the mass is between multiples of 100 g

- read values on a scale which are 1 kg or more
- weigh heavier items where the markers in the scales represent 200 g each
- solve word problems relating to mass with addition and subtraction.

Spring Term – TEXTBOOK 3A

Chapter 7 Measurement: Volume

By the end of this unit, children will be able to:
- measure volume and capacity in litres and millilitres
- measure volume in millilitres and litres from a 'homemade' bottle with markings
- measure volume using millilitres and litres in comparison to 1 L
- measure larger capacity in litres and millilitres.
- solve word problems related to volume.

Spring Term – TEXTBOOK 3B

Chapter 8 Measurement: Money

By the end of this unit, children will be able to:
- consolidate previous learning about denominations of both notes and coins; to use simple addition to count amounts of money.
- name amounts of money including coins above 100p; to regroup and rename 100p as £1 as a key strategy
- find multiple ways of showing an amount of money
- add money by adding together the pounds and pence separately
- add amounts of money together using different methods
- consolidate the addition of pounds and pence separately.
- consolidate 'making a pound' as a strategy for adding amounts of money where the coins equal more than 99p
- learn the 'make a pound' strategy with number bond diagrams; to consolidate the strategies associated with the addition of money.
- use multiple methods for subtracting amounts of money, including concrete materials and the column method.
- use visual comparison to subtract amounts of money; to consolidate column subtraction where there is no regrouping of pence required.
- use number bonds to subtract amounts of money; to develop number sense through decision making.
- use number bonds as the primary strategy for subtracting amounts of money; to split pounds and pence simultaneously when subtracting amounts of money.
- learn the 'counting on' strategy for calculating change; to consolidate the number bonds strategy for calculating change.
- solve word problems involving money using bar modelling as the key strategy; to learn how to use comparative models where pupils are solving by seeing the smaller amount inside of the larger amount
- use part-whole bar models to represent word problems; to apply addition and subtraction strategies to solve word problems.

Summer Term – TEXTBOOK 3B

Chapter 9 Measurement: Time

By the end of this unit, children will be able to:
- use the terms 'a.m.' and 'p.m.' correctly to identify morning or afternoon/evening
- learn to tell time to the minute; to understand the relationship between the minute hand and hour hand
- consolidate and apply a variety of vocabulary used to express the time
- compare analogue and digital time; to represent time using both analogue and digital methods
- tell time before the hour using the hour and minute hands
- tell time using 24-hour notation
- use analogue time and 24-hour notation interchangeably
- tell the time on an analogue clock using Roman numerals
- measure time in seconds and milliseconds
- measure time in seconds using a stopwatch; to consolidate previous learning about seconds
- consolidate measuring time in seconds; to conduct a time experiment using seconds
- measure time in hours using an analogue clock
- consolidate the measurement of time in hours
- measure time in hours using analogue clocks and timelines; to count backwards in time by the hour
- measure the passage of time in minutes using an analogue clock and a timeline
- measure time to the minute when it crosses into the next hour; to use number bonds to calculate the passage of time
- measure time in minutes, counting backwards to determine the starting point; to use number bonds and timelines to calculate the passage of time.
- determine how many seconds are in a minute; to use multiplication to calculate the number of seconds in a number of minutes
- convert seconds into minutes using number bonds
- calculate the number of days in a month; to learn which months have 31, 30 and 28/29 days
- find the duration of days for different activities.

Summer Term – TEXTBOOK 3B

Chapter 10 Statistics: Picture Graphs and Bar Graphs

By the end of this unit, children will be able to:
- construct picture graphs from a set of data; to present data with pictures that represent more than one item
- construct bar graphs from a set of data; to use proportion to reflect precise difference in quantity
- read and interpret information from a bar graph; to use and understand vocabulary related to bar graphs
- bar graphs where the scale is not a multiple of all quantities measured
- read bar graphs where the scale is made up of larger increments

Summer Term – TEXTBOOK 3B

Chapter 12 Geometry – Properties of Shapes: Angles

By the end of this unit, children will be able to:

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

Summer Term – TEXTBOOK 3B

Chapter 13 Geometry – Properties of Shapes: Lines and Shapes

By the end of this unit, children will be able to:
- identify, define and create perpendicular lines
- find perpendicular lines in everyday objects
- identify, define and create parallel lines; to find parallel lines in everyday objects
- define and identify vertical and horizontal lines; to find vertical and horizontal lines in everyday life
- describe 2-D shapes using familiar vocabulary about lines and angles
- draw 2-D shapes in proportion to their size; to identify how big a shape is
- create 3-D shapes out of nets; to use vocabulary related to 3-D shapes and their properties
- construct 3-D shapes out of clay and discuss their properties
- describe 3-D shapes using familiar terms; to identify properties of 3-D shapes.

Summer Term – TEXTBOOK 3B

Chapter 16 Measurement: Perimeter of Figures

By the end of this unit, children will be able to:
- determine the perimeter of basic shapes; to use grid paper to measure the perimeter of a shape
- measure the perimeter of a shape using 1 cm grid paper
- determine the perimeter of different shapes; to create shapes with a specific perimeter
- find the perimeter of shapes using 2 cm grids
- calculate the perimeter of a shape using a ruler to measure the side lengths
- calculate the perimeter of a rectangle using multiplication and addition
- calculate the perimeter of a square using addition and multiplication
- calculate the perimeter of rectangles and irregular shapes by adding up the length of each side

- consolidate learning about perimeter using practical word problems; to calculate the perimeter of a rectangle using properties of shapes.