Year 3 Mathematics Yearly Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Week 1	**Unit 1** Place value, addition and subtraction	**Unit 5** Multiplication tables (3× and 4×)	**Unit 10** Place value, addition and subtraction	**Unit 15** 2-D shape	**Unit 20** Addition and subtraction	**Unit 25** Place value
Week 2		**Unit 6** Multiplication	**Unit 11** Multiplication	**Unit 16** Addition, subtraction and statistics		**Unit 26** Calculation
Week 3	**Unit 2** Length and perimeter	**Unit 7** Division		**Unit 17** Fractions	**Unit 21** Multiplication and division	**Unit 27** Fractions
Week 4	**Unit 3** Statistics	**Unit 8** Time	**Unit 12** Fractions	**Unit 18** Position & direction	**Unit 22** 2-D shape	**Unit 28** Statistics
Week 5	**Unit 4** Addition and subtraction	**Unit 9** 3-D shape	**Unit 13** Division	**Unit 19** Time	**Unit 23** Decimal place value	**Unit 29** Time
Week 6		Assess and review week	**Unit 14** Volume, capacity and mass	Assess and review week	**Unit 24** 3-D shape	Assess and review week

Year 3 Expectations – Sequence of Learning

Autumn 1 – 6 weeks

Number and Place Value Weeks 1 and 2	Addition and Subtraction
Lesson	**Lesson Focus**
1	Exchange 10 ones for 1 ten and vice versa Exchange 10 tens for 1 hundred and vice versa
2	Identify and represent numbers up to 1000 using concrete materials such as base 10 apparatus Partition a three-digit number into hundreds, tens and ones
3	Identify and represent numbers up to 1000 using models such as place value counters and arrow cards. Partition a three-digit number into hundreds, tens and ones
4	Compare three or more numbers up to 1000 when represented using the same concrete materials saying which numbers are greater or less and use <, > and = correctly.
5	Identify the multiples of 10 immediately before and after numbers with up to three-digits and round the numbers to the nearest ten.
6	Identify the number ten more/ ten less and one hundred more/ one hundred less than a given number with up to three-digits without crossing any boundaries.
7	Add and subtract a three-digit number and tens mentally with no boundaries crossed
8	Identify and describe the rule (addition or subtraction) in a number sequence by calculating the difference between two adjacent numbers Extend number sequences by using the identified rule
9	Recognise addition calculations that require mental partitioning e.g. 37 + 25 and use this strategy where appropriate
10	Recognise subtraction calculations that require mental partitioning e.g. 42 – 17 and use this strategy where appropriate

Length and Perimeter Week 3	2-D Shape
Lesson	**Lesson Focus**
1	Accurately draw 2-D shapes including with specific properties using squared and isometric paper
2	Measure lengths in cm and m Add and subtract, including finding the difference between, lengths.
3	Measure lengths in mm Add and subtract, including finding the difference between, lengths
4	Develop an understanding of perimeter using straws Use counting to calculate the perimeter of a polygon drawn on squared cm paper
5	Use counting to calculate the perimeter of a polygon drawn on squared cm paper Calculate the perimeter of a polygon where the lengths of sides are given

Statistics Week 4	
Lesson	**Lesson Focus**
1	Derive and use addition and subtraction facts for 100 using bead strings, a blank 10 by 10 grid etc. Recognise that when calculating addition facts to 100 the 1s total 10 and the tens total 90
2	Collect data in a frequency table and use the data to draw a bar chart with a scale in ones.
3	Use data in a frequency table to draw a bar chart with a scale in twos. Answer questions using data contained in a bar chart.
4	Solve one-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in a bar chart or table
5	Present and interpret data using pictograms with a symbol representing 1, 2 or 10 (including half symbols). Solve one-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in a pictogram

Addition and Subtraction Wees 5 and 6	
Lesson	**Lesson Focus**
1	Add 2 two-digit numbers using formal written methods with exchange from ones into tens
2	Add 2 three-digit numbers using formal written methods with exchange from ones into tens
3	Add 2 three-digit numbers using formal written methods with exchange from ones into tens
4	Choose an appropriate strategy for a given addition calculation
5	Subtract 2 two-digit numbers using formal written methods with exchange from tens into ones
6	Subtract 2 three-digit numbers using formal written methods with exchange from tens into ones
7	Subtract 2 three-digit numbers using formal written methods with exchange from tens into ones
8	Choose an appropriate strategy for a given subtraction calculation
9	Use a formal written method of addition to make a given criteria, e.g. choose from a set of given numbers to make a total Use a formal written method of subtraction to make a given criteria, e.g. choose from a set of given numbers to make a difference
Learning Check Up To This Point	

Autumn 2 – 5 weeks

Multiplication Tables (3× and 4×) Week 1	
Lesson	**Lesson Focus**
1	Use arrays to understand the multiplication facts for the 3 and 4 multiplication tables (including commutativity) Identify relationships within a multiplication square Derive the 4 multiplication table from the 2 multiplication table by using doubling strategies
2	Understand the relationship between arrays and repeated addition Represent multiplication as repeated addition on a number line
3	Derive facts from the 3 and 4 multiplication tables using known facts from the 1, 2, 5 and 10 multiplication tables
4	Extend number sequences by using an identified rule (counting in 3s, 4s, 10s and 100s)
5	Use single Venn and one criterion Carroll diagrams to compare and sort numbers
Mental and Written Multiplication **Week 2**	
Lesson	**Lesson Focus**
1	Use partitioning to derive doubles of all numbers to 50
2	Use an array to represent a teens number multiplied by a single digit number and partition the array into tens and ones to support calculating the product
3	Use partitioning to calculate a teens number multiplied by a single digit number (grid method)
4	Use partitioning to calculate a teens number multiplied by a single digit number (grid method)
5	To solve routine and non-routine problems involving multiplication
Mental and Written Division **Week 3**	
Lesson	**Lesson Focus**
1	Understand division as sharing and grouping
2	Use concrete or pictorial representations to derive the division facts related to the multiplication facts that they know

3	Use concrete materials to show division as repeated subtraction for numbers beyond the multiplication facts that they know
4	Use concrete materials to show division as repeated subtraction for numbers beyond the multiplication facts that they know using greater multiples of the divisor
5	Use concrete materials to show division as repeated subtraction for numbers beyond the multiplication facts that they know including those that have a remainder

Time
Week 4

Lesson	Lesson Focus
1	Tell and write time on an analogue clock to o'clock, quarter past (15 minutes past), half past (30 minutes past) and quarter to (15 minutes to) Tell and write the time on an analogue clock to 5 minutes – past and to
2	Tell and write the time on an analogue clock to 5 minutes – past and to
3	Tell and write the time on an analogue clock to the nearest minute – past
4	Tell and write the time on an analogue clock to the nearest minute – to
5	Know that there are 60 seconds in a minute Record time in seconds and minutes Compare two time intervals which are in the same unit

3-D Shape
Week 5

Lesson	Lesson Focus
1	Identify and describe the properties of 3-D shapes, including the number of edges, faces and vertices
2	Use construction materials such as Clixi or Polydron to make 3-D shapes
3	Make the skeletons of 3-D shapes using straws and Playdoh
4	Identify horizontal and vertical lines
5	Use single Venn and one criterion Carroll diagrams to compare and sort 3-D shapes
Learning Check Up To This Point	

Spring 1 – 6 weeks

Number and Place Value Week 1	Addition and Subtraction

Lesson	Lesson Focus
1	Identify the multiples of 100 immediately before and after a given number Round numbers with up to three-digits to the nearest hundred, e.g. 356 rounds to 400
2	Add a number up to three-digits and tens where the tens and hundreds digit changes, e.g. ten more than 397 Add a number up to three-digits and ones where the ones, tens and hundreds digit changes, e.g. one more than 499
3	Subtract a number up to three-digits and tens where the tens and hundreds digit changes, e.g. ten less than 407 Subtract a number up to three-digits and ones where the ones, tens and hundreds digit changes, e.g. one less than 500
4	Recognise addition calculations that require mental compensation e.g. 129 + 49 and use this strategy where appropriate
5	Recognise subtraction calculations that require mental compensation e.g. 175 - 39 and use this strategy where appropriate

Multiplication Weeks 2 and 3	
Lesson	**Lesson Focus**
1	Use partitioning to derive doubles of all numbers to 100.
2	Use arrays to understand the multiplication and division facts for the 8 multiplication table Derive the 8 multiplication table from the 4 multiplication table
3	Use Venn and Carroll diagrams to compare and sort numbers
4	Use concrete materials to model the effect of multiplying a two-digit number by 10 Describe the effect of multiplying a two-digit number by ten
5	Multiply a multiple of 10 by a one-digit number, e.g. 60 x 4
6	Use partitioning to calculate a two-digit number multiplied by a single digit number using grid method Use rounding to estimate the answer to a calculation
7	Use partitioning to calculate a two-digit number multiplied by a single digit number using grid method Within known tables, use partitioning to multiply T1 by a one-digit number Use rounding to estimate the answer to a calculation
8	Use compensation to multiply 19 by a single digit number
9	Solve positive integer scaling problems
10	Solve correspondence problems in which n objects are connected to m objects. (finding all possibilities)

Fractions Week 4	
Lesson	**Lesson Focus**
1	Recognise fractions of a shape, set of objects or quantity (with small denominators)
2	Recognise and use fractions as numbers (on a bar model and demarcated number line) Estimate the position of a fraction on a number line
3	Use concrete materials to find unit fractions (with denominators of ten or less) of a set of objects, e.g. $\frac{1}{7}$ of 63 Use concrete materials to find non-unit fractions (with denominators of ten or less) of a set of objects, e.g. $\frac{2}{7}$ of 63
4	Use pictorial representations, e.g. bar model, to find unit fractions of a set of objects, e.g. $\frac{1}{3}$ of 51 Use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects, e.g. $\frac{2}{3}$ of 51
5	Solve problems involving fractions

Division Week 5	
Lesson	**Lesson Focus**
1	Use partitioning to derive and use halves of multiples of 10 where the tens digit is odd Use partitioning to derive and use halves of all even numbers to 100
2	Use a horizontal number line to show division as repeated subtraction including numbers beyond the multiplication facts that they know
3	Use a vertical number line to show division as repeated subtraction including numbers beyond the multiplication facts that they know using greater multiples of the divisor
4	Use a vertical number line to show division as repeated subtraction for numbers beyond the multiplication facts that they know using greater multiples of the divisor (including remainders)
5	Use division to identify unlabelled marks on a scale Read different scales to the nearest whole unit
Volume, capacity and mass Week 6	
Lesson	**Lesson Focus**
1	Estimate, measure and compare the volume/capacity of different containers Find the difference between the volume/capacities of containers
2	Measure and add the volume/capacity of different containers
3	Estimate, measure and compare the mass of different objects Find the difference between the masses of objects
4	Measure and add the mass of different objects
Learning Check Up To This Point	

Spring 2 – 5 weeks

2-D Shape Week 1	
Lesson	**Lesson Focus**
1	Recognise angles as a description of a turn Recognise quarter, half, three-quarter and full turns from different starting points as an appropriate number of right angles
2	Recognise where sides meet at a vertex in a shape that an angle is created Recognise a drawn right angle when presented in any orientation
3	Identify pairs of perpendicular and parallel lines
4	Sort 2-D shapes according to their properties - Venn with two intersecting sets and two criteria Carroll diagrams (perpendicular, parallel, right angles)
5	Draw 2-D shapes with specific properties (perpendicular, parallel, right angles)
Addition and Subtraction Week 2	**Statistics**
Lesson	**Lesson Focus**
1	Add two numbers with three digits using formal written methods of columnar addition with exchange from ones into tens and tens into hundreds, e.g. 468 + 356 Use rounding to estimate, and inverse to check, the answer to a calculation
2	Subtract numbers with three digits using formal written methods of columnar subtraction with exchange from tens into ones and hundreds into tens, e.g. 426 – 357 Use rounding to estimate, and inverse to check, the answer to a calculation
3	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
4	Present data using bar charts with a scale in fives or tens Select the most appropriate scale when representing data in a bar chart Interpret information in a bar chart to solve two-step questions
5	Select the most appropriate key when representing data in a pictogram Interpret information in a pictogram to solve two-step questions

Fractions Weeks 3 and 4	
Lesson	**Lesson Focus**
1	Show practically or pictorially that a fraction is one whole number divided by another
2	Use pictorial representations, including the number line, to compare and order fractions with the same denominator Use pictorial representations to compare and order unit fractions
3	Use concrete and pictorial representations to recognise where fractions are equivalent
4	Add fractions to make one whole Subtract fractions from one whole
5	Add fractions with the same denominator within one whole
6	Subtract fractions with the same denominator within one whole
7	Add and subtract fractions with the same denominator within one whole
Position and Direction linked to Fractions Week 4	
Lesson	**Lesson Focus**
1	Describe positions on a square grid labelled with letters and numbers
2	Use a grid to describe position, direction and movement in a straight line
3	Use a grid to describe position, direction, movement and turn
Time Week 5	
Lesson	**Lesson Focus**
1	Tell the time on an analogue clock for minutes past and to, e.g. 33 minutes past 4 and 27 minutes to 5
2	Tell the time on a digital clock to the nearest minute and know whether this is before or after midday
3	Solve time problems working within the hour boundary
4	Solve time problems working across the hour boundary
5	Solve calendar problems working across the month boundary
Learning Check Up To This Point	

Summer 1 – 6 weeks

Addition and Subtraction Weeks 1 and 2	
Lesson	**Lesson Focus**
1	Add more than two numbers with three digits using formal written methods of columnar addition with exchange from ones into tens and tens into hundreds including when the 'carried' amount has more than one ten e.g. 326 + 147 + 219. Include adding more than two numbers with different amounts of digits, e.g. 268 + 34 + 356 Use rounding to estimate, and inverse to check, the answer to a calculation
2	Identify missing digits in columnar addition calculations
3	Subtract numbers with different numbers of digits up to three digits, using formal written methods of columnar subtraction with exchange from tens into ones and hundreds into tens, e.g. 334 – 68 using the place value columns to set the calculation out correctly. Include examples with zero used as a place holder, e.g. 304 – 168 Use rounding to estimate, and inverse to check, the answer to a calculation
4	Identify missing digits in columnar subtraction calculations
5	Recognise addition calculations that require bridging through a multiple of 10 or 100 efficiently
6	Recognise subtraction calculations that require bridging through a multiple of 10 or 100 efficiently
7	Recognise calculations that require counting on mentally to find the difference
8	Choose an appropriate strategy to solve a calculation based upon the numbers involved

Multiplication and Division Weeks 2, 3 and 4	
Lesson	**Lesson Focus**
1	Describe and extend number sequences involving counting on or back in different steps (including 4, 8, 50 and 100) Identify and describe the rule in a number sequence by calculating the step size between non-adjacent numbers in the sequence
2	Use the grid method to solve a two-digit by one-digit multiplication Use rounding to estimate the answer to a calculation
3	Use the grid method to solve multiplication problems including positive integer scaling problems Use rounding to estimate the answer to a calculation
4	Identify missing numbers in grid method calculations
5	Choose an appropriate strategy to solve a multiplication calculation based upon the numbers involved
6	Use a vertical number line to show division as repeated subtraction for numbers beyond the multiplication facts that they know using repeated greater multiples of the divisor (include remainders) Use rounding to estimate the answer to a calculation
7	Use a vertical number line to show division as repeated subtraction for numbers beyond the multiplication facts that they know using efficient greater multiples of the divisor (include remainders) Use rounding to estimate the answer to a calculation
8	Solve division problems that require the interpretation of remainders
9	Choose an appropriate strategy to solve a division calculation based upon the numbers involved

2-D Shape Week 4	
Lesson	**Lesson Focus**
1	Identify whether an angle is greater or less than a right angle
2	Accurately draw 2-D shapes with specific properties (including angles)
3	Measure the perimeter of simple polygons by measuring each side using a ruler and calculating the total

Decimal Place Value Weeks 5 and 6	
Lesson	**Lesson Focus**
1	Use concrete representations, e.g. straws, to understand the relationship between fractional tenths and decimal tenths Identify the value of each digit to one decimal place Know the decimal point separates whole numbers and decimal fractions
2	Use concrete representations, e.g. place value counters, to understand the relationship between fractional tenths and decimal tenths
3	Divide a one-digit number by 10 and describe the effect using a place value chart.
4	Count up and down in fractional and decimal tenths
5	Identify fractional and decimal tenths on number lines
6	Compare numbers with one decimal place
7	Order numbers with one decimal place

3-D Shape Week 6	
Lesson	**Lesson Focus**
1	Recognise and describe 3-D shapes in different orientations, e.g. Which of these shapes has five faces?
2	Sort 3-D shapes according to their properties - Venn with two intersecting sets and two criteria Carroll diagrams

Learning Check Up To This Point

Summer 2 – 5 weeks

Place Value Week 1	
Lesson	**Lesson Focus**
1	Read Roman numerals from I to XII
2	Estimate and place numbers on a range of number lines
3	Estimate and place numbers on a range of number lines
4	Read scales for mass, volume/capacity and temperature
5	Solve non-routine problems involving rounding

Calculation Week 2	
Lesson	**Lesson Focus**
1	Estimate the answer to a calculation (all four operations)
2	Choose and use an appropriate strategy to solve a variety of calculations.
3	Solve one and two step problems involving money
4	Use bar modelling to solve addition and subtraction problems Use inverse operations to check answers
5	Use bar modelling to solve multiplication and division problems Use inverse operations to check answers

Fractions Week 3	
Lesson	**Lesson Focus**
1	Identify fractions with the same denominators on a number line (marked and unmarked) Compare and order fractions with the same denominators
2	Compare and order unit fractions such as $\frac{1}{3}, \frac{1}{4}, \frac{1}{2}$ and $\frac{1}{6}$ by positioning them including on a number line
3	Recognise and show, using diagrams, equivalent fractions with small denominators – applying in different contexts
4	Use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects beyond multiplication table knowledge (using a multiplication grid), e.g. $\frac{3}{7}$ of 56

5	Use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects beyond multiplication table knowledge (using a multiplication grid), e.g. $\frac{3}{7}$ of 56

Statistics Week 4	
Lesson	**Lesson Focus**
1	Pose a question and identify what data to collect to answer the question Collect and record data
2	Present data in a bar chart with an appropriate scale
3	Present data in a pictogram with an appropriate key
4	Use and interpret data from bar charts and pictograms to answer questions Compare and evaluate representations of data
5	Solve problems involving statistics (convert between different representations, incomplete sets of data, matching tables to graphs etc.)

Time Week 5	
Lesson	**Lesson Focus**
1	Record and compare time in terms of seconds, minutes and hours
2	Tell and write the time from an analogue clock including using Roman numerals
3	Tell and write the time from a 12 hour digital clock
4	Solve problems involving time
5	Solve problems involving time
Learning Check Up To This Point	