Maths Overview 2020-21

	Autumn	Spring	Summer
Year One	**Place Value:** Count to 20 and estimate quantities Partition teen numbers; compare. Count to 100 in 1s/10s; compare. Say 1/10 more or less up to 100 **Add/Subtract:** Adding by counting on. Partitioning to create number bonds. Subtraction: count back/take away. Add by counting on (numbers to 20) Number bonds to 10. Say one more/one less up to 100 **Shape and Data:** Explore shapes; do line symmetry. Understand/identify 3-D shapes. Sort 2-D shapes according to properties **Money and Time:** Coins to 10p: identify and exchange. Make amount/find possibilities. O'clock times and sequence events . Days of the week, months of the year	**Place Value:** 1 more and 1 less than 2-digit number. Count in 10s; say numbers 10 more/less. Place value in 2-digit numbers .Compare, order 2-digit numbers using PV. Place value to order 2-digit nos; say 10 more/less **Add/Subtract** Number bonds to 8 and 9; doubles. Use facts and doubles to add 3 numbers. Find 10 more/less than 2-digit number. Relate adding/subtracting using facts. Add and subtract 10, 20, 30 **Multiplication/Division:** Even and odd numbers and doubles . Counting in 2s; even/odd numbers. Doubling and halving **Money and Fractions:** Use coins to pay amounts and find totals Find change; differences between amounts. Understand halves and quarters Find half and quarter of amounts **Measurement and Data:** Measure using a uniform unit. Compare and measure weights Measure lengths in cubes. Find differences between lengths	**Add/Subtract** Add 10s and near 10s to a 2-digit number. Subtract 10s /near 10s from 2-d numbers. Add/subtract 10, 11, 12 Patterns to add 1-digit to 2-digit numbers. Use unit patterns to +/- 1-digit numbers. Number bonds to 10; add to next 10. Add by bridging 10 using number bonds . Bridge 10 to subtract with number bonds. Number facts to add and subtract money **Multiplication/Division/ Fractions:** Doubling, halving, sharing, Half shape, half object, half quantity (sharing **Money and Tim** Find totals of coins using number facts . Change, differences in amounts of money. Totals of amounts; change from 10p, 20p. Analogue time to hour and half hour . Analogue & digital time to hour, 1/2 hour. Units of time and ways of showing times **Measurement and Data:** Everyday language to talk about size, weight, capacity, distance, time, money, compare quantities, compare objects, compare shapes, solve measure problems,

| Year Two | **Place Value:**

Count to 100, identify number, estimate**.** Place value in 2-digit numbers. Make and write amounts of money**.** Make amounts of money; give change

Add/Subtract:

Addition/subtraction facts; missing numbers**.** Know how many to next multiple of 10. Add and subtract 10/20; extend to 11/21**.** Use facts to add several numbers**.** Add/subtract numbers bridging 10. Add/subtract using facts and place value. Use facts/patterns to add/subtract. Add/subtract multiples of 10. Add/subtract 11, 12, 21, 22, etc. . Add/subtract near multiples of 10. Add pairs of 2-digit numbers

Multiplication/Division:

Understand multiplication as sets. Understand doubles/halves to 20

Measurement:

Measure lengths in metric units; rulers . Measure weights in grams and kilograms. Measure capacities in litres. Understand hours, minutes, seconds. Tell the time; introduce 5-minute intervals | **Place Value and fractions:**

Ordinal numbers; properties of numbers. Properties of numbers, e.g. odd/even. Find fraction of shapes (1⁄2, 1⁄4, 1⁄3). Find fractions of amounts (1⁄2, 1⁄4, 1⁄3)

Add/Subtract:

Use facts, patterns, PV to add/subtract. Use number line/grid to add and subtract. Addition/subtraction and word problems. Totals, change and differences using coins. Add and double by partitioning. Subtract by counting back. Choose a strategy to subtract numbers

Multiplication/Division:

Count in 2s, 5s, 10s; 5x tables facts. Division as the inverse of multiplication. Solve multiplication/ division problems.

Shape and Data:
Left, right, clockwise, anti-clockwise turns . Draw and describe 2-D shapes and polygons. Sort shapes: Venn and Carroll diagrams. Tally charts, block graphs and pictograms. 3-D shapes; identify edges, faces, corners. Position and Direction: | **Place Value, Fractions and Money:**

Count 2s, 3s, 5s, 10s; multiples of 2, 5, 10. Count in 1/2s, 1/4s; find fractions of amounts. **Count in fractions.** How to find amounts of money. **Place value in 3-digit numbers. 2- & 3-digit numbers on line; round to 10**

Add/Subtract:

Add by partitioning or counting on. Choose strategies to subtract

Multiplication/Division:

Multiply by 2, 5 and 10. Understand ÷ as inverse of x 3. Multiplying and doubling and inverses. Solve divisions as inverse of multiplication

Time:

Tell digital and analogue time confidently |

Year Three	**Place Value and Money:**	**Place Value and Money:**	**Place Value:**
	Place 2-digit and 3-digit numbers on lines	Partition 3-digit numbers; place on line	Four digit values, 10 or 100 more than/less than
	Understand PV in 3-digit numbers	Understand x 100 and ÷ 100 as inverses	**Add/Subtract:**
	Place value in money: add/subtract	Understand place value in money; x 10 and ÷ 10	Add/subtract from three digit numbers, regrouping, column method, inverse,
	Add/Subtract:	Represent 3-digit numbers in diff ways	**Multiplication/Division:**
	Number facts and inverse operations	Place value in money; add/subtract amounts	Factors, division facts, two digit by one digit multiplication, missing number problems, formal written methods, inverse,
	Using number facts to add/subtract		**Fractions, Decimals, Percentages:**
	Add/subtract: efficient mental strategies	**Add/Subtract:**	Tenths, quarters halves, count in simple fractions, fractions of different measures, fraction of quantity,
	Partitioning to add	Mental addition of	**Counting (forwards and backwards):**
	Using place value to add/subtract	2-digit numbers	Count in 1,2,3,4,5,8,10. 50 and 100
	Mental calculation – complements to 100	Use different strategies to subtract	**Measurement:**
	Mental subtraction – counting up	Expanded addition:	Measure problems, compare measures,
		3-digit numbers - 1	**Money and Time:**
	Multiplication/Division:	Counting up subtraction with nos>100	Money problems, time to nearest minute
	Revision of 2x, 5x and 10x tables: x and ÷	Expanded addition:	**Geometry and Shape:**
	Multiplication/division facts: 3x and 4x	3-digit numbers - 2	Horizontal, vertical, perpendicular and
	Division using facts and remainders	Strategies to subtract from numbers>100	
	Double nos <51; halve even nos <101		
	Mental strategies for x and ÷		
	Times tables; multiplication/division		

	Measurement and Data:	Fractions:	parallel lines,
	Measure length (m/cm) and convert units	Concept of a fraction; halving	**Position and Direction:**
	Measure weights (kg/g); use bar charts	Finding 1⁄2, 1⁄4, 3⁄4, 1⁄3, 2⁄3 of amounts	Acute, obtuse, right angles, turns and right angles,
	Measure capacities (ml/l); use bar charts	Develop the concept of fractions	**Statistics:**
	Measure perimeters; use bar charts	Finding fractions of amounts	Bar charts, pictograms, tables, one and two step data problems,
		Find unit/non-unit fractions using division	
		Counting (forwards and backwards):	
		Time and Data:	
		Tell time to 5 minutes; Roman numerals	
		Time events; units of time; pictograms	
		Tell the time to nearest minute	
		Calculate/compare time intervals	
		Units of time: calculate intervals	
Year Four	**Place Value:**	**Add/Subtract:**	**Place Value:**
	Place 3- and 4-digit numbers on a line	Adding money using column addition	Place and round 4-digit numbers on lines
	Place value in 4-digit numbers	Count up to find change and differences	Negative numbers in temperature
	Place value additions: 4-digit numbers	Column addition:	Count in 25/1000; Roman numerals
	Deepen understanding of place value	4-digit numbers	
	Add/subtract powers of 10, nos > 1000	Subtraction strategies; written methods	**Add/Subtract:**

Fractions: (header at top of second column)

Use place value in calculations

Add/Subtract:

Partitioning and column addition

Mental subtraction incl. counting up

Mental addition and subtraction

Subtraction: frog with 3-D numbers

Mentally add/subtract near multiples

Mentally add/subtract 1-digit numbers

Written subtraction

Multiplication/Division:

Double and halve 2- and 3-digit numbers

Multiplication and division facts

Grid multiplication using tables facts

Division using efficient chunking

Larger divisions with remainders

Measures and Data:

Tell time to nearest minute: am/pm

Calculate time intervals; 24 hour clock

Multiplication/Division:

Times tables: x/÷ facts

Times tables revision: factors and multiples

Multiply multiples of 10 and 100

Grid multiplication: vertical layout

Division: chunking with remainders

Fractions, Decimals:

Unit and non-unit fractions of amounts

Equivalent fractions; simplest form; +/-

Introduction to one place decimals

Consolidate one-place decimal numbers

Rehearse equivalence: fractions/decimals

Decimals: x/÷ by 10/100; +/- 0.1

Shape:

Draw circles, study polygons, e.g. triangles

Identify and explore

3-D shapes

Co-ordinates: draw polygons

Column addition, including money

Expanded & compact column subtraction

Column subtraction, 3- & 4-digit numbers

Appropriate strategies to add/subtract

Column +/- with 3- and 4-digit numbers

Choose methods for add/subt problems

Multiplication/Division:

Factors, multiples, mental multiplication

x/÷ problems: scaling/correspondence

Efficient chunking with remainders

Multiplication problems, formal methods

Revise & solve problems involving +/-/x/÷

Fractions an Decimals

Introduction: 1- and 2-place decimals

Decimal/fraction equivalents, 10/100ths

Compare, order 2-place decimal numbers

+/- 0.1s and 0.01s; measures problems

Equivalent fractions; fraction problems

	Units of time, record data and interpret Rehearse 24 hour clock; time intervals Units of time; draw line graphs	Line of symmetry: identify and construct Angle types; properties of polygons	**Measurement and Data:** Measure in m, cm, mm; convert units Use SI units; represent info on bar charts Find the area of rectilinear shapes Perimeters of rectilinear shapes; area
Year Five	**Place Value:** Place value in 5-digit numbers Place 5-digit numbers on a line; round Place 6-digit numbers on a line; round Deepen understanding of 6-digit numbers **Add/Subtract:** Column addition (4- and 5-digit numbers) Decimal and money addition Column subtraction; choose strategies Revise addition and subtraction **Multiplication/Division:**	**Add/Subtract:** Mental and written addition/subtraction Column subtraction and word problems Mental addition and subtraction strategies **Multiplication/Division:** Multiples and factors; mental x/÷ strategies Short multiplication: 4-digit nos. and money Short division with 3- and 4-digit numbers **Fractions, Decimals, Percentages:** Place value in decimals; rounding	**Place Value:** Negative numbers; count through zero. Place value in 6-digit numbers Identify and write Roman numerals **Add/Subtract:** Add and subtract whole and decimal numbers with more than four digits; mentally calculate adding multiples of 10, 100 and 1000 to values up to six digits **Multiplication/Division:** Factor pairs, common factors; problems involving factors, multiples, squares and cubes; multiplication and division facts to x12; simple ratios and proportion

Multiples, factors and word problems

Primes, divisibility, mental strategies

Grid method and short multiplication

Division of big numbers vertical layout

Fractions, Decimals, Percentages:

Divide by 10/100;

2-place decimals

1- and 2-place decimals on a line; compare

Add/subtract multiples of 0.1/0.01

Subtract decimals with 1 or 2 places

Mixed numbers and fractions of amounts

Add/subtract equivalent fractions

Measurement:

Understand metric and imperial units

Timetables and intervals: 24 hour clock

Perimeters: composite and rectilinear

Regular and irregular areas; volumes

Temperature and negative numbers

Column addition;

2-place decimals

Subtract decimal numbers, e.g. money

x/÷ by 10, 100, 1000; rounding decimals

Subtraction with decimals, e.g. money

Unit and non-unit fraction problems

Multiply fractions; decimal equivalences

Shape:

Deepen understanding of 3-D shapes

Properties of polygons; quadrilaterals

Draw/reflect shapes on co-ordinate grids

Recognise, measure and draw angles

Angle theorems; draw angles in polygons

Fractions, Decimals, Percentages:

Place value in 3-place decimals

Compare and use 3-place decimals

Begin to understand percentages

Subtract decimal numbers by counting up
+/- fractions with related denominators

Multiply fractions by whole numbers

Measurement and Data:

24-hr timetables; calculate time intervals
Draw line graphs and conversion graphs

Concept of rate; line graphs

Regular and irregular shapes; 3-d shapes;
find missing lengths in give shapes;

Year Six	Place value, addition and subtraction	Place Value, Addition and subtraction	Place Value, Addition and subtraction
	Place value in 6-digit numbers	Add, subtract & round 6-/7-digit numbers	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
	Place 6-digit numbers on lines and round	Understand/calculate negative numbers	
	Column addition and estimation	Strategies in mental and written calculation	
	Column subtraction and estimation	Use brackets and order of operations	**Fractions and Decimals**
	Mental and written calculation strategies		Multiply simple pairs of proper fractions, writing the answer in the simplest form.
	Addition and subtraction	**Multiplication and Division**	Divide proper fractions by whole numbers.
		Scale factor problems concerning area	Associate a fraction with division to calculate decimal fraction equivalents, for simple fractions.
	Multiplication and Division	Solve rate and scaling problems	
	Multiples, factors and prime numbers	Long division; different remainder forms	
	Solve short multiplication problems	Use short/long multiplication in problems	
	Use short division to solve problems	Use short/long division in problems	**Measures**
	Long multiplication problems		Recognise that shapes with the same areas can have different perimeters and vice versa.
	Formal and mental calculation strategies	**Measures and Data:**	Calculate the area of parallelograms and triangles.
		Conversion: metric/imperial units; line graphs	recognise when it is possible to use formulae for area and volume of shapes.
	Fractions and Decimals:	Time intervals, timetables, 24-hour clock	
	Add or subtract decimals	Pie-charts; find the mean of a data set	
	Subtract 1-and 2- place decimals	Calculate areas of different shapes	**Shape:**
	Understand decimals with three places	Calculate volumes of cubes/cuboids	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
	Add/subtract multiples of 0.01/0/001		
	Decimals, fractions: compare, order	**Decimals and Fractions:**	

	Equivalent fractions: add and subtract	Place value in 3-place decimals	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
		Add numbers with up to 3 decimal places	
	Shape:	Multiply/divide 2-place decimal numbers	
	2-D shapes (circles and quadrilaterals)	Percentages and fractions of amounts	**Measures and Data**
	Draw, translate, reflect polygons	Multiply and divide fractions	Calculate and interpret the mean as an average recognise that shapes with the same areas can have different perimeters and vice versa.
	Draw 2-D shapes: find missing angles		
	Construct 3-D shapes using nets		Calculate the area of parallelograms and triangles.
	Algebra		recognise when it is possible to use formulae for area and volume of shapes
	Generate and use simple formulae		
	Solve equations with two unknowns		
	Generate and continue linear sequences		