Stage 5

Unit 1 –written addition and subtraction

Lesson 2 – use column methods to add up to 4 digit numbers together

Lesson 3 – use column methods to subtract numbers with up to 4 digits

Lesson 4 – recognise when you will need to use addition or subtraction in multistep problems and explain why.

Lesson 5 - Recap/Problem Solving

Unit 2 – Place value, roman numerals and introduction to negatives

Lesson 1 – understand place value up to seven digits and use to order numbers

Lesson 2 – read and write numbers up to seven digits using place value

Lesson 3 – understand how to write numbers using roman numerals up to D and M, write a year in roman numerals

Lesson 4 – count forwards or backwards in whole number steps for negatives

Lesson 5 – use of negatives in real life situations, such as temperature

Lesson 6 - Recap/Problem Solving

Unit 3 – Multiplication and division, written methods

Lesson 2 – multiply and divide by 10, 100, 1000 etc. by considering place value

Lesson 3 – multiply up to a 4 digit number by a single digit

Lesson 4 – multiply up to a 4 digit number by a 2 digit number

Lesson 5 – divide up to a four digit number by a 1 digit number, include a decimal, for exact answers

Lesson 6 – as above but with remainders and writing the remainder as a fraction (obviously not decimals)

Lesson 7 – division problems, interpreting remainders to fully explain answers (i.e. 4 full coaches and 16 people on a fifth)

Lesson 8 – identify which operations are needed in multistep problems

Unit 4 – investigating properties of 2D shapes

Lesson 1 – understand properties of rectangles and use to find missing lengths, angles, coordinates etc

Lesson 2 – define a polygon, understand and identify a regular/irregular polygon, use to find missing values as above

Lesson 3 – Recap/Problem Solving (Enrichment Opportunity)

Unit 5 – Factors multiples and primes

Lesson 1 – understand and find multiples

Lesson 2 – understand and find factors

Lesson 3 – find common factors or multiples

Lesson 4 – define a prime number, find factors to identify a prime

Lesson 5 – recall primes up to 50 and know how to test a prime up to 100

Lesson 6 – recognise and find squares up to 100 and cubes up to 125

Lesson 7 - Recap/Problem Solving (Enrichment Opportunity)

Unit 6 – Equivalence of fractions decimals and percentages

Lesson 1 – compare fractions using diagrams, equal and unequal denominators

Lesson 2 – identify when we can easily compare fractions without a diagram (equal denominators), order a set of fractions

Lesson 3 – understand equivalence of fractions, finding equivalent using diagrams and multiplication

Lesson 4 – find common denominators, use to compare fractions

Lesson 5 – understand place value extends after the decimal point up to 1/1000. Realise that proportions out of 10, 100 or 1000 can be written as either fractions or decimals, use equivalence to change tenths or hundredths into thousandths.

Lesson 6 – write decimals as fractions, and use the fractions to compare the decimals (ie get a common denominator)

AP1 (35 Lessons)

Unit 7 – counting/pattern sniffing

Lesson 1 – count forwards/backwards in tens (100's or 1000's) from any positive number

Lesson 2 – count forwards/backwards through zero using a number line

Lesson 3 – apply to real life (temperature etc.)

Lesson 4 – use SDT triangle in problems

Lesson 5 - Enrichment Opportunity for SDT

Unit 8 – angle properties

Lesson 1 – measuring and naming angles

Lesson 2 – drawing angles and naming

Lesson 3 – measuring and drawing reflex angles

Lesson 4 – estimating angles and naming

Lesson 5 – know and use angles on a straight line to find missing angles

Lesson 6 – know and use angles at a point to find missing angles

Lesson 7 – identifying angles in geometric shapes and using the rules above

Lesson 8 – problem solving questions from above/recap

Lesson 9 – Enrichment Opportunity

Unit 9 – converting units of measure

Lesson 1 – understand and be able to use different types of units of measure, metric and imperial

Lesson 2 – convert between metric unit of length (cm to m)

Lesson 3 – guess approximate values of weights, convert kg to g

Lesson 4 – volume/capacity, convert metric units, litres to ml

Lesson 5 – know approx. conversion for imperial to metric (see sow)

Lesson 6 – problem solving involving units (such as best value for different units)

Lesson 7 – applying to problems/recap

Lesson 8 – Enrichment Opportunity

Unit 10 – Properties of 3D shapes

Lesson 1 – describe and identify 3D shapes, recognise from drawings, diagrams and pictures from real life

Lesson 2 – identify 3D shapes from nets

Lesson 3 – sketch 3D shapes on isometric paper

Lesson 4 – Recap/Problem Solving

Unit 11 – calculating with fractions, decimals and percentages

Lesson 1 – switching between improper fraction and a mixed number

Lesson 2 – adding fractions with equal denominators, or when denominators are multiples of each other

Lesson 3 – multiplying and proper fraction by a whole number, using diagrams to illustrate

Lesson 4 – mixed number multiplied by a whole number, using diagrams

Lesson 5 – recognise percentage and decimal equivalents of standard fractions (such as half, quarters, fifths, tenths, hundredths etc.)

Lesson 6 – be able to discover percentage and decimal equivalents for fractions with a denominator of 20, 25, 40 and 50

Lesson 7 – understanding thousandths and problem solving with up to 3 d.p

AP2 (33 lessons)

Unit 12 – area, perimeter and volume

Lesson 1 – understand perimeter and how to find for composite rectilinear shapes

Lesson 2 – understand definition of area and units used, find area of rectangle by counting

Lesson 3 – discover the formula for area of a rectangle, extend to squares and use to find areas.

Lesson 4 – estimate areas of irregular shapes with both straight lines and curves

Lesson 5 – understand concept of volume, difference to capacity, and how it can be found by counting cubes

Lesson 6 – investigate how to find total number of cubes more efficiently, build towards formula for volume of a cuboid

Lesson 7 – Enrichment Opportunity

Unit 13 – rounding and approximation

Lesson 1 – recap rounding to nearest 10, 100, 1000 and extend to 10,000 or 100,000 etc.

Lesson 2 – round decimals with 2 decimal places to whole number and 1 d.p

Lesson 3 – estimating/checking answers to +/- by rounding

Lesson 4 – estimating/checking answers to multiply or divide by rounding

Unit 14 – Transformations

Lesson 1 – understand and describe a translation using words

Lesson 2 – perform a translation on a shape

Lesson 3 – understand what a reflection does to a shape and reflect in simple horizontal/vertical mirror lines

Lesson 4 – reflection in axes and lines parallel to them and describing reflections

Lesson 5 – understand and identify congruent shapes, similar shapes

Lesson 6 – Recap/Problem Solving

Unit 15 – presenting data through line graphs

Lesson 1 – understand the difference between a line graph and a bar line graph (discrete and continuous data), draw a bar line graph.

Lesson 2 – draw line graphs, such as distance time, time series, etc.

Lesson 3 – reading data from line graphs (one step and two step questions such as how much in January, how much more in January than February etc.)

Lesson 4 – Problem solving and reasoning – when to use, comparing graphs etc.

Unit 16 – Time and timetables

Lesson 1 – change between different units of time, understand and use 24hr clock and identify what to use in problems

Lesson 2 – read and interpret data from timetables

Lesson 3 – problem solving with timetables - complete a timetable, plan a day etc.

Lesson 4 – understand that % means out of 100, write a percentage as a fraction and a decimal

Lesson 5 – mixed questions on switching between F, D and P

Lesson6 – Enrichments

LSQ

Mental addition and subtraction

Mental multiplication and division