

Driver: Science

Main learning Challenge: Are all Medicines Marvellous?

	Week 1 Who had a marvellous plan? All 4 operations	Week 2 Who had a marvellous plan? FDP	Week 3 Why is medicine marvellous? Operations with fractions	Week 4 Why is medicine marvellous? Measure	Week 5 Can you create a marvellous medicine? Data & Statistics	Week 6 Can you create a marvellous medicine? Ratio/four operations
Maths Learning Challenge	<p>Y6 – Can you Use your knowledge of the order of operations to carry out calculations involving the four operations?</p> <p>Y5 – Can you use the formal written methods of columnar addition and subtraction with increasingly large numbers (beyond 4 digits) to aid fluency?</p> <p>Can you solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign?</p>	<p>Y6 – Can you associate a fraction with division and calculate decimal fraction equivalents? Can you Solve problems involving the calculation of % and the use of & comparisons?</p> <p>Y5 – Can you compare and order fractions whose denominators are multiples of the same number?</p> <p>Can you recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number?</p>	<p>Y6 – Can you multiply simple pairs of proper fractions, writing the answer in its simplest form? Y6 – Can you divide proper fractions by whole numbers?</p> <p>Y5 – Can you add and subtract fractions with the same denominator and denominators that are multiples of the same number?</p>	<p>Y6 – Can you calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]? Can you solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate? (Measuring ingredients for recipe) Y5 – Can you estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]? Can you convert between different units of metric measure (for</p>	<p>Y6 – Can you interpret and construct pie charts and line graphs and use these to solve problems? L.C. Can you calculate and interpret the mean as an average? Y5 – L.C. Can you solve comparison, sum and difference problems using information presented in a line graph? L.C. Can you complete, read and interpret information in tables, including timetables?</p>	<p>Y6 – Can you solve problems involving the relative size of two quantities, where missing values can be found using integer multiplication and division facts? Y5 - Can you use all four operations to solve problems involving money using decimal notations, including scaling?</p>

				example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre?		
Basic Skills Focus	Y6 - Perform mental calculations, including with mixed operations Y5 - Multiply and divide numbers mentally drawing upon known facts	Y6 – Coin cards, fractions as decimals Y5 – Mixed numbers and improper fractions	Y6 – Identify common factors, common multiples and prime numbers Mental multiplication Y5 – Common factors and multiples	Times tables Rounding Reading scales	Reading scales Mean median mode range Interpret negative numbers Y5 – All four calculations problem solving	Multiply and divide numbers mentally drawing upon known facts Y5 – All four calculations
Number	Y6 - Use knowledge of the order of operations to carry out calculations involving the four operations Y5 – Sequences and inverse	Y6 - Compare and order fractions, including fractions > 1 Y5 – Methods for converting between mixed and improper	Y5/6 - Identify common factors, common multiples and prime numbers	x/ by 10, 100, 1000 Using scales Estimate the weight and volume using own knowledge	Ordering numbers	
Calculation	Y6 – BODMAS Y5 – Addition and subtraction by 4 digits	Y6 – Fractions to decimals, finding fraction and % of amounts. Y5 – Converting between mixed and improper fractions.	Y6 – Methods for multiplying and dividing fractions by whole numbers Y5 – Adding and subtracting fractions.	Multiplication Division	Y6 - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Y5 – Formal written methods of addition and subtraction.	Y6 - Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication Y5 - Multiply numbers up to 4 digits or two-digit number using a formal written method, including long multiplication for two-digit numbers
Shape and Measure	Y6 - Find pairs of numbers that satisfy an equation with unknown numbers Y5 - Can use all four	Y6 – Find fractions of shapes Y5 – Draw shapes to represent mixed numbers	Y6 - Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Y5 - Identify, describe and represent the position of a shape following a reflection or			

	operations to solve problems involving money using decimal notations, including scaling	(communicating)	translation, using the appropriate language, and know that the shape has not changed			
Problem solving	Y6 – SATs style questions Y5 – Met – GDS – Community project (research the measurements of medicines and costing)	Y6 – SATs style questions Y5 – Met - True and false/Spot the mistake (Mastery doc p.10) GDS – Write own worded problems/How to guide/Focus Education p.131	Y6 – SATs style questions Y5 – Met – Missing number addition and subtraction fractions/ Reasoning statements (Mastery doc p.11) GDS – Mastery doc p.11/	Y6 - Ratio of measures to produce for 1 person/3 people, etc] Y5 Met - Create a recipe for new healthy product (link to community) GDS – Create a recipe for a new healthy product for different amounts of people...	Y5/6 - Interpret data about healthy product (link to community) Which remedy would people prefer? Relaxing/calming/good for ailments. Present data appropriately.	Profit
Generalising	Y6 - Mastery doc 4 operations Y5 – Met – Step by step guide for all four methods. GDS – Common mistakes – teach the children where they’re going wrong.	Y6 – Mastery doc 4 operations Y5 – Draw shapes to represent mixed numbers (communicating)	Y6 – Mastery doc – fractions dividing fractions Y5 – Show addition and subtraction of fractions pictorially. GDS – Plan a lesson on how to teach addition and subtraction of fractions.	Y6 - True or False: If a container is taller it must have a greater volume. Y5 – Met GDS -	What can you see from the data?	Y6 - Concept cartoons around money and profit Y5 – Met - GDS – Write own money problems and answers
Key Vocabulary	Sequence Balance Algebra Value Nth term	Numerator Denominator Equivalence Simplify	Numerator Denominator Mixed number Improper fraction Divide Integer	Volume Capacity Base Width Height Cm cubed Estimate	Pie charts Angles Line graph Sum Comparison	Addition Subtraction Multiplication Division Decimal Product Integer
Wider curriculum opportunities/links	Community project – measurements of medicine and costing		Community project			Enterprise
Pre teaching	Fractions Dividing Mixed numbers Improper	Fractions Dividing Mixed numbers Improper	Volume	Statistics – Pie charts, comparison sum	Solve problems using the 4 operations	Fractions Dividing Mixed numbers Improper

