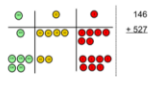
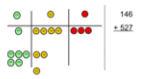
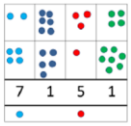
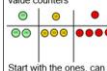
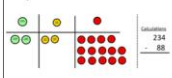
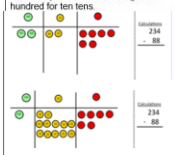
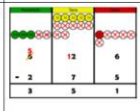
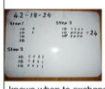
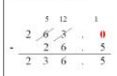
Year 6 Maths Long Term Planning

Week	Topic	Objectives	Vocabulary	Things to revisit
1,2	Number – Place Value	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. Round any whole number to a required degree of accuracy. Use negative numbers in context and calculate intervals across zero. Solve number and practical problems that involve all of the above.	numeral; represents; stands for; exchange; equal to; inequality sign; ascending / descending order; estimate; approximately; exact; round; nearest; integer; positive; negative; minus; multiple of; digit; consecutive; sequence; predict; pair; rule; relationship; classify; divisible; factorise; factor; square number; prime factor	
3,4,5	Number - Addition, Subtraction, Multiplication and Division	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. Perform mental calculations, including with mixed operations and large numbers Identify common factors, common multiples and prime numbers. Use their knowledge of the order of operations to carry out calculations involving the four operations. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Solve problems involving addition, subtraction, multiplication and division. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	add; addition; more; plus; increase; sum; total; increase; total; altogether; score; double; halve; subtract; minus; decrease; leave; hw many are left; difference between; how many more/fewer; equals; sign; is the same as; tens boundary; hundreds boundary; units boundary; tenths boundary; inverse; lots of; groups of; times; multiply; multiplication; product; repeated addition; array; row; column; double; halve; share; divide; division; divisible; remainder; factor; quotient; divisible by inverse	

Addition

	Concrete Year 2, Year 3 & Year 4	Pictorial Year 4 (4 Digit numbers)	Abstract Year 4, 5 and 6 – With decimals.
Column method- regrouping	Make both numbers on a place value grid.  Add up the units and exchange 10 ones for one 10.  Add up the rest of the columns, exchanging the 10 counters from one column for the next place value column until every column has been added. This can also be done with Base 10 to help children clearly see that 10 ones equal 1 ten and 10 tens equal 100. As children move on to decimals, money and decimal place value counters can be used to support learning.	Children can draw a pictoral representation of the columns and place value counters to further support their learning and understanding.  7 1 5 1	Clearly show the exchange below the addition. 536 + 85 621 11 As the children move on, introduce decimals with the same number of decimal places and different. Money can be used here. 72.8 + 54.6 127.4 1 1 

Subtraction

	Concrete Year 2, Year 3 & Year 4	Pictorial Year 2, Year 3 & Year 4	Abstract Year 4, 5 and 6 – With decimals.
Column method with regrouping	Use Base 10 to start with before moving on to place value counters. Start with one exchange before moving onto subtractions with 2 exchanges. Make the larger number with the place value counters  Start with the ones, can I take away 8 from 4 easily? I need to exchange one of my tens for ten ones.  Now I can subtract my ones. Now look at the tens, can I take away 8 tens easily? I need to exchange one hundred for ten tens.  Now I can take away eight tens and complete my subtraction  Show children how the concrete method links to the written method alongside your working. Cross out the numbers when exchanging and show where we write our new amount.	 Draw the counters onto a place value grid and show what you have taken away by crossing the counters out as well as clearly showing the exchanges you make.  When confident, children can find their own way to record the exchange/regrouping. Just writing the numbers as shown here shows that the child understands the method and knows when to exchange/regroup.	Children are to use the compact method.  This will lead to an understanding of subtracting any number including decimals. 

Multiplication

			Year 5 & Year 6
Standard Written Method			This moves to the more compact method. 1342 x 18 13420 10736 24156

Division

	Concrete	Pictorial	Abstract Year 5
Short division			Begin with divisions that divide equally with no remainder. 218 r 3 4 | 875 Move onto divisions with a remainder. Year 6 86 r 2 5 | 432 Finally move into decimal places to divide the total accurately. 14.6 35 | 511.0

6	Assessments			
7	Continuation of 4 ops	See above	See above	

Year 6 Main Maths Long Term Planning

Week	Topic	Objectives	Vocabulary	Things to revisit
8-9	Number – Decimals	Associate a fraction with division and calculate decimal fraction equivalents (for example 0.375). Identify the value of each digit in numbers given to three decimal places and multiply and divide by 10, 100 and 1000 giving answers up to 3 decimal places. Multiply one-digit numbers with up to 2 decimal places by whole numbers. Use written division methods in cases where the answer has up to 2 decimal places. Solve problems which require answers to be rounded to specified degrees of accuracy. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	part; equal parts; fraction; improper fractions; mixed number; numerator; denominator; equivalent; reduced to; cancel; one whole; half; quarter; one whole; eighth; third; sixth; ninth; tenth; twelfth; eleventh; fifth; twentieth; hundreth; thousandth; proportion; ratio; in every; for every; to evry; as many as; decimal; decimal fraction; decimal point; decimal place; oercentage; percent; %	

	Concrete	Pictorial	Abstract Year 5
Short division			Begin with divisions that divide equally with no remainder. 2 1 8 (3) 4 | 8 7 2 Move onto divisions with a remainder. 8 6 r 2 (3) 5 | 4 3 2 Year 6 Finally move into decimal places to divide the total accurately. 1 4 . 6 (16) (21) 3 5 | 5 1 1 . 0

10-12	Number - Fractions	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions > 1. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 × 1/2 = 1/8]. Divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6]. Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 8 3]. Recall and use equivalances between simple fractions, decimals and percentages, including in different contexts.	part; equal parts; fraction; improper fractions; mixed number; numerator; denominator; equivalent; reduced to; cancel; one whole; half; quarter; one whole; eighth; third; sixth; ninth; tenth; twelfth; eleventh; fifth; twentieth; hundreth; thousandth; proportion; ratio; in every; for every; to evry; as many as; decimal; decimal fraction; decimal point; decimal place; oercentage; percent; %	
13	Assessments			
14	Number - Percentages	Recall and use equivalences between simple fractions, decimals and percentages.	part; equal parts; fraction; improper fractions; mixed number; numerator; denominator; equivalent; reduced to; cancel; one whole; half; quarter; one whole; eighth; third; sixth; ninth; tenth; twelfth; eleventh; fifth; twentieth; hundredth; thousandth; proportion; ratio; in every; for every; to every; as many as; decimal; decimal fraction; decimal point; decimal place; percentage; percent; %	