Medium term Plans for Spring 2018 Years 5/6 – Mrs Cottam

Y5: Main focus of teaching/activities	Outcomes	Y6: Main focus of teaching/activities	Outcomes
Addition, subtraction and place value Place value in 6-digit numbers (PV + and -, compare numbers). Add and subtract 1, 10, 100, 1000, 10,000 and 100,000 to/from 6-digit numbers. Place 6-digit numbers on number lines and round to the nearest 100 or 1000.	1. Say what each digit represents in a 6-digit number. 2. Write place value related additions and subtractions. 3. Compare pairs of 6-digit numbers. 1. Add and subtract 1, 10, 100, 1000, 10,000 and 100,000 to/from 6-digit numbers. 1. Place 6-digit numbers on empty number lines. 2. Round 6-digit numbers to the nearest 100 to 1000.	***Addition, subtraction and place value*** Place value in 7-digit numbers (PV + and -, compare numbers). Add and subtract 1, 10, 100, 1000, 10,000, 100,000 and 1,000,000 to/from 7-digit numbers. Place 7-digit numbers on number lines and round to the nearest 10,000, 100,000 or 1,000,000.	1. Say what each digit represents in a 7-digit number. 2. Write place value related additions and subtractions. 3. Compare pairs of 7-digit numbers. 1. Add and subtract 1, 10, 100, 1000, 10,000, 100,000 and 1,000,000 to/from 7-digit numbers. 1. Place 7-digit numbers on empty number lines. 2. Round 7-digit numbers to the nearest 10, 100, 1000, 10,000, 100,000 or 1,000,000.
Use negative numbers in context of temperature; Calculate rises and falls in temperature. Use negative numbers in the context of temperature; Find differences between temperatures. HEADSTART ASSESSMENT	1.Use negative numbers in context of temperature. 2. Calculate rises and falls in temperature. 1. Find a difference between a negative temperature and positive temperature. HEADSTART ASSESSMENT	Use negative numbers in context of temperature; Calculate rises and falls in temperature. Calculate intervals across zero. HEADSTART ASSESSMENT	1. Use negative numbers in context of temperature. 2. Calculate rises and falls in temperature. 1. Calculate intervals across zero. HEADSTART ASSESSMENT

Y5: Main focus of teaching/activities	Outcomes	Y6: Main focus of teaching/activities	Outcomes
Addition and subtraction Use place value to add and subtract; add and subtract near multiples of 100 and 1000. Use counting up (Frog) to subtract four digit-numbers from multiples of 1000. Subtract pairs of 2-digit numbers with one decimal place.	1. Use place value to add and subtract. 2. Add and subtract near multiples of 100 and 1000. 1. Use counting up (Frog) to subtract four digit-numbers from multiples of 1000. 2. Find all possibilities by working systemically. 1. Subtract pairs of 2-digit numbers with one decimal place, choosing to count back or count up (Frog).	***Addition and subtraction*** Add and subtract near multiples of powers of ten including decimals (e.g. +/- 2.99, 3.02). Use knowledge of the order of operations and brackets to carry out calculations. Explore the order of operations using brackets; for example, 2 + 1 x 3 = 5 and (2 + 1) x 3 = 9.	1. Add and subtract near multiples of integers including decimals (e.g. +/- 2.99, 3.02). 1. Understand that calculations are carried out in a specific order: brackets first, then multiplication and division before addition and subtraction. 1. Use knowledge of the order of operations and brackets to carry out calculations.
Use Frog to find change from £100; use column addition to add amounts. Use Frog to find the difference between amounts of money. MENTAL MATHS	1. Use Frog to find change from £100. 2. Use column addition to add 2 or 3 amounts of money. 1. Use Frog to find the difference between amounts of money. 2. Estimate differences. **MENTAL MATHS**	Use Frog to find change from £100; use column addition to add several amounts. Solve multi-step word problems; Use brackets to record the necessary calculations. MENTAL MATHS	1. Use Frog to find change from £100 or £200. 2. Use column addition to add 3 or 4 amounts of money. 1. Solve multi-step word problems. 2. Use brackets to record the necessary calculations. **MENTAL MATHS**

Y5: Main focus of teaching/activities	Outcomes	Y6: Main focus of teaching/activities	Outcomes
Place Value and Addition Place value addition and subtraction of numbers with 1 or 2 decimal places. Multiply and divide by 10, 100 and 1000 (answers from 2dp to 6-digit whole numbers). Round decimals to the nearest whole and tenth.	1. Say what each digit represents in a number with 2 decimal places. 2. Use place value to add and subtract. 1. Multiply and divide by 10, 100 and 1000 to give answers with two decimal places. 1. Round numbers with 2 decimal places to the nearest whole and tenth.	***Place Value and Addition*** Place value addition and subtraction of numbers with 3 decimal places. Multiply and divide by 10, 100 and 1000 (answers from 3 decimal places to 7-digit whole numbers. Round decimals to the nearest whole, tenth and hundredth.	1. Say what each digit represents in a number with 3 decimal places. 2. Use place value to add and subtract. 1. Multiply and divide by 10, 100 and 1000 to give answers with three decimal places. 1. Round numbers with 3 decimal places to the nearest whole, tenth and hundredth.
Use written addition to add numbers with 1 or 2 decimal places; use rounding to estimate totals. Add two or three numbers with 2 decimal places. HEADSTART	1. Add pairs of 3-digit numbers with 1 decimal place, 2 decimal places or both. 2. Use rounding to make an estimate. 1. Add three 4-digit numbers with 2 decimal places. 2. Use rounding to make an estimate. **HEADSTART**	Use written addition to add numbers with 3 decimals in context of measures (litres, km, kg); Use rounding to estimate totals. Use written addition to add numbers with 3 decimals in context of measures (litres, km, kg); Use rounding to estimate totals. HEADSTART	1. Add pairs of numbers with 3 decimal place, or 2 and 3 decimal places. 2. Use rounding to make an estimate. 1. Add pairs of numbers with 3 decimal places. 2. Use rounding to make an estimate. **HEADSTART**

Y5: Main focus of teaching/activities	Outcomes	Y6: Main focus of teaching/activities	Outcomes
Multiplication and division Find lowest common multiples and highest common factors. Use mental strategies (factors and multiples) to multiply by 5, 20, 6, 4 and 8. Use mental strategies to divide by 5, 20, 6, 4 and 8.	1. Find the highest common factor of three 2-digit numbers. 2. Find the lowest common multiple of at least 3 single-digit numbers. 1. Use mental strategies to multiply two and 3-digit numbers by 5, 20, 6, 4 and 8. 2. Use knowledge of factors and multiples in mental multiplication. 1. Use mental strategies to divide 'friendly' numbers by 5, 20, 6, 4 and 8. 2. Use knowledge of factors and multiples in mental multiplication.	***Multiplication and division*** Solve problems involving rate. Use mental strategies (factors and multiples) to multiply by 5, 20, 6, 4 and 8; Solve scaling problems. Use mental strategies to divide by 5, 20, 6, 4 and 8; Solve scaling problems.	1. Solve problems involving rate. 1. Use mental strategies to scale up. 1. Use mental strategies to scale down.
Use short multiplication to multiply 4-digit numbers by 1-digit numbers; Use rounding to approximate. Use short multiplication to multiply 4-digit numbers by 1-digit numbers; Use commutativity of multiplication. MENTAL MATHS	1. Use short multiplication to multiply 4-digit numbers by 1-digit numbers. 2. Use rounding to approximate. 3. Understand that multiplication is commutative. 1. Use short multiplication to multiply 4-digit numbers by 1-digit numbers. 2. Use rounding to approximate. 3. Understand that multiplication is commutative. **MENTAL MATHS**	Multiply and divide numbers with up to 2 decimal places, e.g. 0.4 × 6, 3.5 ÷ 7, 5 × 0.03, 0.15 ÷ 3. Use long multiplication to multiply 3-digit then 4-digit numbers by numbers between 10 and 35; Use rounding to approximate. ***MENTAL MATHS***	1. Use tables facts and place value to multiply and divide numbers with up to 2 decimal places. 1. Use long multiplication to multiply 3-digit and 4-digit numbers by numbers between 10 and 35. 2. Use rounding to approximate. **MENTAL MATHS**

Y5: Main focus of teaching/activities	Outcomes	Y6: Main focus of teaching/activities	Outcomes
Fractions and decimals Revise comparing fractions with related denominators using equivalence. Know decimal equivalents for halves, quarters, fifths, tenths and hundredths. Use mental division strategies to find unit fractions of amounts.	1. Compare and order fractions with related denominators. 1. Know decimal equivalents for halves, quarters, fifths, tenths and hundredths. 1. Use mental division strategies to find unit fractions of amounts.	***Fractions, decimals, percentages and mean*** Revise comparing fractions with unrelated denominators using equivalence. Recognise equivalent fractions, decimals and percentages. Find percentages of amounts.	1. Compare and order fractions with unrelated denominators. 1. Recognise equivalent fractions, decimals and percentages. 1. Find percentages of amounts.
Find non-unit fractions of amounts. Find fractions, multiply and divide to solve word problems. ASSESSMENT	1. Find non-unit fractions of amounts. 1. Find fractions, multiply and divide to solve word problems. **ASSESSMENT**	Use mental division strategies to find non-unit fractions of amounts. Calculate and interpret mean as an average. ASSESSMENT	Use mental division strategies to find non-unit fractions of amounts. 2. Use knowledge of factor and divisibility rules to find out which fractions of amounts will give whole number answers. Understand and find the mean of a set of values. **ASSESSMENT**
Division and fractions Multiply unit fractions by whole numbers. Multiply non-unit fractions by whole numbers. Use short division to divide 3-digit numbers by single-digit numbers.	1. Multiply unit fractions by whole numbers, writing any improper fractions as mixed numbers. 1. Multiply non-unit fractions by whole numbers, writing any improper fractions as mixed numbers. 1. Use short division to divide 3-digit numbers by single-digit numbers.	***Division and fractions*** Multiply pairs of fractions together. Divide fractions by whole numbers. Multiply and divide fractions.	1. Multiply pairs of fractions. 1. Divide fractions by whole numbers. 1. Multiply pairs of fractions and divide fractions by whole numbers.

Y5: Main focus of teaching/activities	Outcomes	Y6: Main focus of teaching/activities	Outcomes
Use short division to divide 3-digit numbers by single-digit numbers including where the first digit is less than the divisor. Use short division to divide 3-digit numbers by single-digit numbers; divide any remainders to give fractions. ***MENTAL MATHS***	1. Use short division to divide 3-digit numbers by single-digit numbers including where the first digit is less than the divisor. 1. Use short division to divide 3-digit numbers by single-digit numbers including where the first digit is less than the divisor. 2. Divide any remainders to give fractions. ***MENTAL MATHS***	Use long division to divide 3-digit numbers by 2-digit numbers. Use long division to divide 3-digit numbers by 2-digit numbers; divide any remainders to give fractions. ***MENTAL MATHS***	1. Use long division to divide 3-digit numbers by 2-digit numbers. 1. Use long division to divide 3-digit numbers by 2-digit numbers. 2. Divide any remainders to give fractions. ***MENTAL MATHS***
Place Value and Subtraction Use place value to add and subtract to/from 6-digit numbers. Compare 6-digit numbers and round to the nearest 10, 100, 1000, 10,000 and 100,000. Use decomposition to subtract pairs of 5-digit numbers.	1. Use place value to add and subtract to/from 6-digit numbers. 1. Compare 6-digit numbers. 2. Round 6-digit numbers to the nearest 10, 100, 1000, 10,000 and 100,000. 1. Use decomposition to subtract pairs of 5-digit numbers.	***Multiplication, ratio and percentages*** Solve problems involving similar shapes where the scale factor is known; Find areas of triangles, rectangles and parallelograms. Solve problems involving similar shapes where the scale factor can be found. Describe ratios between unequal quantities, e.g. paint, solve ratio problems, e.g. in context of recipes.	1. Solve problems involving similar shapes where the scale factor is known. 2. Find areas of triangles, rectangles and parallelograms. 1. Solve problems involving similar shapes where the scale factor can be found. 1. Use ratio to solve problems, e.g. to adapt a recipe for a different number of people.

Y5: Main focus of teaching/activities	Outcomes	Y6: Main focus of teaching/activities	Outcomes
Use decomposition to subtract pairs of 5-digit numbers. Use decomposition to subtract pairs of 5-digit numbers and 4-digit numbers from 5-digit numbers; solve word problems.	1. Use decomposition to subtract pairs of 5-digit numbers including where there is a zero in the first number. 1. Use decomposition to subtract pairs of 5-digit numbers and 4-digit numbers from 5-digit numbers. 2. Solve word problems.	Solve problems involving unequal quantities. Find percentages, link to proportion.	1. Solve problems involving fractions and ratios. 1. Use fractions and percentages to describe proportions.
Number, Decimals, Addition and subtraction Multiply and divide by 10, 100 and 1000. Place numbers with two decimal places on a line, round to nearest tenth or whole. Use Frog (counting up) to subtract pairs of numbers with same number of decimal places.	1. Multiply and divide by 10, 100 and 1000 (answers with 2 or fewer decimal places). 1. Place numbers with two decimal places on an empty line, round to the nearest tenth or whole. 1. Use Frog (counting up) to subtract pairs of numbers with the same number of decimal places.	***Number, Decimals and Algebra*** Multiply and divide by 10, 100 and 1000. Understand and use simple formulae. Express missing number problems algebraically; Find pairs of numbers that satisfy an equation with two unknowns, enumerate possibilities of combinations of two variables.	1. Multiply and divide by 10, 100 and 1000 (answers with 3 or fewer decimal places). 2. Identify missing functions. 1. Understand and use simple formulae. 1. Solve simple equations. 2. Find pairs of numbers which satisfy pairs of equations.