St Andrew's **Mathematics** *Framework 2014*
Year 3 Medium term plan: autumn term

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of + and – facts)	
Read and write whole numbers up to 1000 Add/subtract 10, 100 to any whole number Count on/back in 10s, 100s from any two- and three-digit number Recall addition and subtraction facts for each number up to at least 20 Recall pairs that make 100 Recognise negative numbers in context: number line, thermometer	Derive doubles of whole numbers to 50, corresponding halves. Recall multiplication facts up to x2,x3, x5 x10 Recall multiplication facts in x10 table and derive division facts. Count in multiples of 2,3,4,5, 10. and 100 from zero

Days	Topic	Objectives: children will be taught to
3	**NUMBER** **Number and place value**	*Read and write whole numbers to 1000 in figures and words* *Compare two three-digit numbers, say which is more or less and give a number that lies between them* *Order a set of whole numbers to 1000; position them on a number line* *Know what each digit represents and partition three-digit numbers into a multiple of 100, a multiple of 10, and ones.*
10	**NUMBER** **Addition and Subtraction** Mental calculation strategies (+ –) Money and 'real life' problems Making decisions, checking results	Check calculations by adding in different order. Put larger number first in order to count on. Identify near doubles. Bridge through a multiple of 10 and adjust. *Add and subtract numbers with up to 3 digits using practical addition without carrying and practical subtraction without exchanging.* Recognise all coins and notes. Understand £/p notation (eg £3.06) Find totals, give change and work out how to pay. Choose appropriate number operations and calculation methods to solve word problems. Explain and record methods informally.
13	**MEASURES** **Measures** **Time**	*Read time to 5 minutes on an analogue clock .Read time from a digital clock* Record and compare time in terms of minutes, hours and O'clock *Know the number of seconds in a minute /days in each month, year and leap year* *Compare the duration of events* Use ruler and draw and measure lines to nearest half cm Read and begin to write the vocabulary related to length Choose an appropriate number operation and calculation method to solve word problems. Explain and record method informally. Measure and compare using m, cm. Know relationship m, cm; km,m Read scales to the nearest division. Record to nearest whole/half unit, or as mixed units (eg 3m 20cm) Read and being to write the vocabulary related to mass Measure and compare using kilograms and grams and know the relationship between them. Suggest suitable units and equipment to estimate or measure mass
	GEOMETRY **Angles** **Properties of Shape**	Classify and describe 3-D and 2-D shapes, referring to reflective symmetry, facts, sides/edges, vertices, angles. Introduce horizontal and vertical Draw shapes (including diagonal sides) on square grids. Identify right angles in 2-D shapes and in the environment. Investigate general statements about shapes.

Read and write whole numbers up to 1000 Say the number that is 10, 100 more/less than any three-digit number Count on/back in 10s, 100s from any two-/three-digit number State subtraction fact corresponding to addition fact and vice versa.	Derive doubles of whole numbers to 50, corresponding halves Derive near doubles Derive sums and differences of multiples of 10. Recognise odd/even numbers to 11 Recall multiplication facts in x2,x3,x5 and x10 tables and derive division facts. Recall multiplication facts up to 5 x 5.

Days	Topic	Objectives
5	**NUMBER** **Counting and number sequences**	Count in multiples of 3,4,8.50 and 100 from zero Estimate and count larger collections by grouping them in tens, then other numbers. Create and describe simple number sequences Recognise odd and even numbers to 1000. Solve number puzzles. Explain methods and reasoning orally and in writing.
10	**NUMBER** **Multiplication and division** Understanding x and ÷ Mental calculation strategies (x ÷) Money and 'real life' problems	Recognise that multiplication can be done in any order To multiply by 10/100, shift the digits one/two places to the left. Write and calculate mathematical statements for x and ÷ within the multiplication tables. Find remainders after division Choose an appropriate number operation and calculation method to solve word problems involving money and 'real life'.
5	**NUMBER** **Fractions**	Recognise unit fractions 1/3, ¼, 1/5, 1/6, 1/8,1/10 1/12 and use them to find fractions of shapes and numbers. Recognise fractions that are several parts of whole 2/3, ¾, 3/10. Know that ½ lies between ¼ and ¾ -visually
5	**NUMBER** **Addition and Subtraction** Mental calculation strategies (+ –) Money and 'real life' problems Making decisions, checking results	Understand that subtraction is the inverse of addition. Say a subtraction statement equivalent to an addition statement and vice versa. Find a small difference by counting up from the smaller number. Choose appropriate number operations and calculation methods to solve word problems. Explain and record method.
5	**STATISTICS**	Collect data using a tally. Solve a given problem by organising and interpreting data in frequency tables and in pictograms with the symbol representing two units.

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of + and – facts)	
Count up and down in tenths.	Order a set of four-digit numbers.
Read and write whole numbers up to 1000	Derive doubles of whole numbers to 20, corresponding halves
Count on/back in 10s, 100s from any two-/three-digit number	Derive near doubles
State subtraction fact corresponding to addition fact and vice versa	Recognise odd/even numbers to 100
Add/subtract a 3 digit number and ones/tens	Recall multiplication facts in x2, x3, x4, x5, and x10 tables and derive division facts
Recall pairs of multiples of 100 with a total of 1000	
Recognise negative numbers in context: number line, thermometer	

days	Topic	Objectives: children will be taught to
3	**NUMBER** **Number and place value**	*Address number words to 1000 through spellings* *Count in multiples of 4,8,50 to and from zero* Read and write the vocabulary of comparing and ordering numbers, including ordinal numbers to 100. Compare two three-digit numbers and say which is more and less. Give a number that lies in between. Round any two and three -digit number to nearest 10 and give estimates for their sums and differences.
10	**NUMBER** **Addition and Subtraction** Mental calculation strategies (+ –) Written methods Money and 'real life' problems Making decisions, checking results	Add three then four single-digit numbers mentally Add three or four small numbers by putting the largest number first and/or finding pairs that total 10 Partition into 5 and a bit (splitting number bonds 8=5+3) to add 6, 7 or 8 *Add and subtract numbers with up to 2 digits using practical addition with carrying and practical subtraction with exchanging.* *Choose appropriate number operations and calculation methods to solve money and 'real life' word problems with one or more steps.* *Check using inverse operations*
10	**MEASURES** **Measures** **Time**	Tell and write the time from using 12-hour analogue clocks to the minute (eg 9:16) Record and compare time in terms of minutes, hours and O'clock. Use a.m/p.m, morning, afternoon. Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare duration of events, e.g. estimate and calculate time taken up by particular events or tasks. Measure and compare using litres and millilitres, and know the relationship between them. Suggest suitable units and equipment to estimate or measure capacity. Record measurements using mixed units, to the nearest whole/half unit (eg 3.5 litres). Use decimal notation for m and cm. Suggest suitable units and equipment to estimate or measure lengths, including km. Read scales and dials Record measurements using mixed units, or to the nearest whole/half unit (eg 3.5kg) Choose appropriate number operations and calculation methods to solve measurement word problems with one or more steps
5	**GEOMETRY** **Angles** **Properties of Shape**	Make and describe shapes and patterns Relate 2d and 3d shapes in different orientations Make and use right-angled turns (eg2 right angle turns make a half turn) Use the four compass points (cross-curricular) Solve shape problems or puzzles. Explain reasoning and methods.

Read, write compare whole numbers up to 1000 in numerals and words	Add/subtract a 3 digit number and ones/tens
Count from 0 in 4s, 50s,	Recall pairs of multiples of 100 with a total of 1000
Find 10 or 100 more or less than given number	Recall multiplication facts in x2, x3, x4, x5, and x10 tables and derive division facts.
Count on or back in 10s, 100s from any two-/three-digit number	Recall multiplication facts in x3 table and corresponding division facts
Count up and down in tenths.	Order a set of three-digit numbers
State subtraction fact corresponding to addition fact and vice versa	
Derive doubles of whole numbers to20, corresponding halves	
Derive doubles of multiples of 5 to 50	

days	Topic	Objectives
5	**NUMBER** **Counting and number sequences**	Count in multiples of 2,3,4,5,8,10.50 and 100 from zero Create and describe simple number sequences Investigate general statements about familiar numbers and give examples that match them. Solve number puzzles Explain methods and reasoning orally and in writing.
10	**NUMBER** **Multiplication and division** Understanding x and ÷ Mental calculation strategies (x ÷) Money and 'real life' problems	Partition into tens and units and recombine Recognise division is inverse of multiplication Use doubling and halving, starting from known facts Use know facts and place value to multiply and divide mentally (40x3) Calculate x & ÷ problems using 2 digit numbers x 1 digit numbers using mental and formal written methods Choose appropriate number operations and calculation methods to solve money or 'real life' word problems with two steps. Check results, eg check division by multiplication, halving by doubling.
5	**NUMBER** **Fractions**	Begin to recognise simple equivalent fractions, eg 5/10 is equivalent to ½, 5/5 to 1 whole. Recognise unit fractions 1/3, ¼, 1/5, 1/6, 1/8,1/10 1/12 and use them to find fractions of shapes and numbers. Estimate a simple fraction (proportion) of a shape
5	**STATISTICS**	Solve a given problem by organising and interpreting data in bar charts pictograms and tables – intervals labelled in ones then twos. Use ICT to create a simple bar chart. Solve one step and two step questions using information presented in bar charts, pictograms and tables

Year 3 Medium term plan: summer term

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of + and – facts)	
Read, write compare whole numbers up to 1000 in numerals and words *Count from 0 in 4s, 8s, 50s, 100s* Count up and down in tenths. *Find 10 or 100 more or less than given number* State subtraction fact corresponding to addition fact and vice versa Derive doubles of multiples of 5 to 50, corresponding halves Derive doubles of multiples of 50 to 500 Add/subtract 9, 19, 29… and 11,21,31… Recognise negative numbers in context: number line, thermometer	Add/subtract a 3 digit number and ones/tens Recall pairs of multiples of 100 with a total of 1000 Recall pairs of multiples of 5 with a total of 100 Recall multiplication facts in, x3, x4, x5, x8 and tables and derive division facts. Count in threes from and back to zero Recall multiplication facts in x3 and x6 table and begin to derive division facts. Read time to 5 minutes on analogue (9:40) and read 12-hour digital clocks to the minute (eg 9:16)

days	Topic	Objectives: children will be taught to
3	**NUMBER** **Number and place value**	*Count in multiples of 4,8,50 to and from zero from any multiple* Round any two and three-digit number to the nearest 100 and give estimates for their sums and differences.. Identify unlabelled divisions on a number line or measuring scale
10	**NUMBER** **Addition and Subtraction** Mental calculation strategies (+ –) Money and 'real life' problems Making decisions, checking results	Extend understanding of addition and subtraction Add several simple 2-digit numbers. Add three then four single-digit numbers mentally Add or subtract a near multiple of 10 to a two-digit number, by adding or subtracting the nearest multiple of 10 and adjusting Add three or four small numbers by putting the largest number first and/or finding pairs that total 10 Partition into 5 and a bit (splitting number bonds 8=5+3) to add 6, 7 or 8 *Add and subtract numbers with up to 3 digits using practical/column addition with carrying and practical/column subtraction with exchanging.* *Choose appropriate number operations and calculation methods to solve money and 'real life' word problems with one or more steps.* *Check using inverse operations*
13	**GEOMETRY** **Angles** **Properties of Shape** **Perimeter** **Time**	Tell and write the time from using 12 hour digital and 24 hour digital clocks to the minute (eg 9:16) Use Roman numerals from I to XII when reading time. Record and compare time in terms of seconds, minutes, hours and O'clock. Use a.m/p.m, morning, afternoon, noon and midnight Choose appropriate number operations and calculation methods to solve time word problems with one or two steps Measure the perimeter of simple 2D shapes. Choose appropriate number operations and calculation methods to solve measurement word problems with one or more steps. Identify and sketch lines of symmetry, recognise shapes with no line of symmetry Sketch reflection of simple shape in a mirror Read and begin to write the vocabulary of position, direction and movement. Recognise that a straight line is two right angles Introduce perpendicular and parallel Compare angles with a right angle, saying whether they are more or less Investigate general statements about shapes, and suggest examples to match them. Explain reasoning.

Read, write compare whole numbers up to 1000 in numerals and words *Count from 0 in 4s, 8s, 50s, 100s* Count up and down in tenths. *Find 10 or 100 more or less than given number* Derive doubles of multiples of 5 to 50, corresponding halves Derive doubles of multiples of 50 to 500, corresponding halves Round and three-digit number to the nearest 100 Order a set of three-digit numbers	Add/subtract a 3 digit number and ones/tens Recall pairs of multiples of 100 with a total of 1000 Derive quickly number pairs that total 100 (eg 62 + 38) Recall multiplication facts in, x3, x4, x5, x8 and tables and derive division facts.

days	Topic	Objectives
5	**NUMBER** **Counting and number sequences**	Count in multiples of 3,4,5,8,50 to and from zero from any multiple Solve number puzzles, including missing numbers. Explain methods and reasoning orally and in writing.
10	**NUMBER** **Multiplication and division** Understanding x and ÷ Mental calculation strategies (x ÷) Money and 'real life' problems	Calculate x & ÷ problems using 2 digit numbers x 1 digit numbers using mental and written methods Round up or down after division Use know facts and place value to multiply and divide mentally Choose appropriate number operations and calculation methods to solve money or 'real life' word problems with one or two steps – use mental and formal written methods. Explain and record method. Check results.
5	**NUMBER** **Fractions**	Recognise and show, using diagrams, equivalent fractions with small denominators Add and subtract fractions with same denominator within 1 whole. (5/7 + 1/7=6/7) Solve fraction problems
5	**NUMBER** **Addition and Subtraction** Mental calculation strategies (+ –) Written methods Money and 'real life' problems Making decisions, checking results	Choose and use mental and formal written methods to solve addition and subtraction problems, including money and measures. Use known number facts and lace value to add/subtract mentally.
5	**STATISTICS**	Interpret and present data using bar charts Solve one step and two step questions using information presented in bar charts Solve a given problem by organising and interpreting data in Venn and Carroll diagrams – two criteria.