The Grange Destiny Curriculum

MATHS

	Autumn (6+ 6)		Spring (6+6)		Summer(5.5)+7	
RECEPTION						
R	Match and sort Compare amounts Compare size, mass & capacity Exploring pattern	Representing 1, 2 & 3 Comparing 1, 2 & 3 Composition of 1, 2 & 3 Circles and triangles Positional language Representing numbers to 5 One more or less Shapes with 4 sides Time	Introducing zero Comparing numbers to 5 Composition of 4 & 5 Compare mass (2) Compare capacity (2) 6, 7 & 8 Combining two amounts Making pairs	Length & height Time (2) Counting to 9 & 10 Comparing numbers to 10 Bonds to 10 3-D shapes Spatial awareness Patterns	Build numbers beyond 10 Count patterns beyond 10 Spatial reasoning 1 Match, rotate, manipulate Adding more Taking away Spatial reasoning 2 Compose and decompose	Doubling Sharing & grouping Even & odd Spatial reasoning 3 Visualise and build Deepening understanding Patterns & relationships Spatial mapping (4) Mapping

YEAR 1

1	**Number: Place Value (within 10)-5weeks** *Say what is one more and one less of a given number* *Say what these words mean and use them in my work: equal to, more than, less than, most, least* *Use objects and draw pictures to show numbers including a number line* Sort objects Count objects Count objects from a larger group Represent objects Recognise numbers as words count on from any number 1 more Count backwards within 10 1 less Compare groups by matching Fewer, more, same Less than, greater than, equal to Compare numbers Order objects and numbers The numbers line	**Addition & Subtraction (within 10)-Subtraction (5 weeks)** *Read, write and work out questions involving addition (+), subtraction (-) using concrete objects and pictorial representations* *Use objects, pictures and my knowledge of number facts to help me to solve addition and subtraction problems to 20* Introduce parts and wholes Part- whole model Writer number sentences Fact Families - addition facts Number bonds within 10 Systematic umber bonds within 10 Number bonds to 10 Addition - add together Addition - add more Addition problems Find a part Subtraction -find a part Fact families - the either facts Subtraction - take away/ crossing out (How many left?) Subtraction - take away (How many left?) Subtraction on a number line Add or subtract 1 or 2 **Geometry: Shape (1 WEEK)** *Recognise and say the names of common 3-D shapes like cuboids, cubes, pyramids and spheres* *Recognise and say the names of common 2-D shapes like rectangles, squares, circles and triangles* *Order and arrange objects and shapes in patterns* Recognise and name 3D shapes Sort 3D shaped Recognise and name 2D shapes Sort 2D shapes Patterns with 3D and 2D shapes	**Number: Place Value Within 20 (3 WEEKS)** *Read and write numbers from 1 to 20 in numerals and words* Count within 20 Understand 10 Understand 11, 12 and 13 Understand 14, 15 and 16 Understand 17, 18 and 19 Understand 20 1 more and 1 less The number line to 20 Use a number line to 20 Compare numbers to 20 Order numbers to 20 **Number: Addition & Subtraction (within 20)3 weeks** *Add and subtract 1- and 2-digit numbers to 20* Add by counting on within 20 Add ones using number bonds Find and make number bonds to 20 Doubles Near doubles Subtract ones using number bonds Subtraction - counting back Subtraction - finding the difference Related facts Missing number problems	**Number: Place Value Within 50 (2 WEEKS)** *Recognise odd and even numbers* Count from 20 to 50 20, 30, 40 and 50 Count by making groups of tens Groups of tens and ones Partition into tens and ones The number line to 50 Estimate on a number line to 50 1 more, 1 less **Measurement: Length and Height (2 WEEKS)** *Say if objects are longer or shorter, taller or shorter or long or short when I measure them* *Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); volume and capacity (litres/ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels* Compare lengths and heights Measure length using objects Measure length in centimetres **Measurement: Mass and Volume (2 WEEKS)** *Say if an object is heavier or lighter than another object* *Say if a container with water in it is full or empty, a quarter full or a quarter empty* Heavier and lighter Measure mass Compare mass Full and empty Compare volume Measure capacity Compare capacity	**Number: Multiplication and Division (3 WEEKS)** *Count in twos, fives and tens up to 100* *Work out doubles of numbers up to 10 by using and counting objects* *Work out half of even numbers up to 20 by sharing or grouping objects and counting them* Count in 10s Make equal groups Add equal groups Make arrays Make doubles Make equal groups- grouping Make equal groups- sharing **Number: Fractions (2 WEEKS)** *Name and find ½ of a shape, an object or a quantity of objects* *Name and find ¼ of a shape, an object or a quantity of objects* Find a half (1) Find a half (2) Find a quarter (1) Find a quarter (2) **CONSOLIDATION (3 days)**	**Geometry: Position and Direction (1 WEEK)** *Describe the position and direction of two objects using words like left, right, inside and outside, forwards and backwards* *Describe the movement of an object using the words whole, half, quarter and three-quarter turns.* Describe turns Describe position (1) Describe position (2) **Number: Place Value to 100 (2 WEEKS)** *Count aloud up to 100, starting from any number* *Count aloud backwards from 100, starting from any number* *Read and write numbers up to 100* Counting to 100 Partitioning numbers Comparing numbers (1) Comparing numbers (2) Ordering numbers One more, one less **Measurement: Money (1 WEEK)** *Name the value of different coins and notes* Recognising coins Recognising notes Counting in coins **Measurement: Time (2 WEEKS)** *Put words about time events in order e.g. before, after, first, today, yesterday, tomorrow, morning, afternoon, evening* *Say today's date* *Say the days of the week and the months of the year in order* *Tell the time when it is o'clock and half past the hour* *Say if an action was slower or quicker than another action* Before and after Dates Time to the hour Time to the half hour Writing time Comparing time **CONSOLIDATION (1 week)**

Year 2

2

Number: Place Value-4 weeks

Read, write and order numbers from 0 up to 100
Partition any two-digit number into different combinations of tens and ones, explaining thinking verbally, in pictures or using apparatus
Solve word problems using place value and number facts with two digit numbers with some accuracy
Say the value of each digit in a 2-digit number (tens, ones)
Place <, > and = correctly to describe the relationship between numbers
Choose if it is best to work out an answer using a mental method or a written method
Count on in 2s, 3s, 5s and 10s from any 2-digit number (A & S)
Estimate an answer to an addition, subtraction, multiplication or division up to 100
Numbers to 20
Count objects to 100 by making 10s
Recognise tens and ones
Use a place value chart
Partition numbers to 100
Write numbers to 100 in words
Flexibly partition numbers to 100
Write numbers to 100 in expanded form
10s on a number line to 100
10s and 1s on a number line 100
Estimate numbers on a number line
Compare objects
Compare numbers
Order objects and numbers
Count in 2s, 5s and 10s
Count in 3s

Addition & Subtraction- 1 weeks

Show that two numbers can be added in any order and the result is the same answer
Check the answer to a subtraction by adding the answer to the amount that is being subtracted
Use number bonds within 10 to reason with and calculate bonds to and within 20, recognising other associated additive relationships
Bonds to 10
Fact families – addition and subtraction
bonds to 20
Related facts
Bonds to 100 (tens)
Add and subtract 1s
Add by making 10

Addition & Subtraction- 4 weeks

Add and subtract three 1-digit numbers mentally
Solve simple one step addition and subtraction problems where a number is missing within 20
Add and subtract two 2-digit numbers in my head
Add three 1 digit numbers
Add to the next 10
Add across a 10
Subtract across a 10
Subtract from a 10
Subtract a 1-digit number from a 2-digit number – across a ten
10 more,10 less
Add and subtract 10s
Add two 2-digit numbers (not across a 10)
Add two 2-digit numbers (across a ten)
Subtract a 2-digit number from a 2-digit number (not across 10)
Subtract a 2-digit number from a 2-digit number (across 10)
Mixed addition and subtraction
Compare number sentences
Missing number problems

Geometry: Properties of Shape- 3 weeks

Say how many sides 2-D shapes have
Work out how many lines of symmetry some common 2-D shapes have
Compare and sort common 2-D and 3-D shapes and everyday objects, using their properties to describe similarities and differences
Say which 2-D shapes make up the faces of common 3-D shapes
Say how many edges, vertices and faces common 3-D shapes have

Recognise 2-D and 3-D shapes
Count sides on 2-D shapes
Count vertices on 2-D shapes
Draw 2-D shapes
Lines of symmetry on shapes
Use lines of symmetry to complete shapes
Sort 2-D shapes
Count faces on 3-D shapes
Count edges on 3-D shapes
Count vertices on 3-D shapes
Sort 3-D shapes
Make patterns with 2 D and 3-D shapes

Measurement: Money- 2 weeks

Name and use the symbols £ and p correctly
Add and subtract money of the same unit to work out what change to give e.g. 18p item paid for with a 20p coin
Combine amounts of money to make a given value
Count money - pence
Count money - pounds (notes and coins)
Count money - pounds and pence
Choose notes and coins
Make the same amount
Compare amounts of money
Calculate with money
Make a pound
Find change
Two-step problems

Number: Multiplication & Division- 4 weeks

Double any number up to and including 50 and work out half of any even number up to 100
Check the answer for a division by multiplying the answer by the divider i.e. because multiplication and division calculations are the inverse of each other
Prove that two numbers can be multiplied in any order and give the same answer
Rewrite addition statements as simplified multiplication statements e.g. 10+10+10+5+5+5+5 as 3 x10 + 4 x 5 as 5 x 10
Recall multiplication and division facts for the 2, 5 and 10 multiplication tables
Recognise equal groups
Make equal groups
Add equal groups
Introduce the multiplication symbol
Multiplication sentences
Use arrays
Prove that changing the order of numbers in a division calculation makes the answer change
Check the answer for a multiplication by dividing the answer by one of the multipliers i.e. because multiplication and division calculations are the inverse of each other
Use objects to calculate half of an odd number of objects, giving the answer as a remainder and fraction
Solve one-step word problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts
Calculate the answer to multiplication and division calculations within the multiplication tables that I know and write them using the multiplication (x), division (÷) and equals (=) signs
Make equal groups – grouping
Make equal groups – sharing
The 2 times-table
Divide by 2
Doubling and halving
Odd and even numbers
The 10 times-table
Divide by 10
The 5 times-table
Divide by 5, The 5 and 10 times-tables

Measurement: Length & Height- 2 weeks

Read scales on measuring equipment like rulers, weighing scales, thermometers and measuring cylinders to the nearest numbered unit where the divisions are in ones, twos, fives and tens using standard units
Compare and order measurements and record the results using >, < and =
Measure in centimetres
Measure in metres
Compare lengths and heights
Order lengths and heights
Four operations with lengths and heights

Mass, Capacity & Temperature- 2 weeks (3 weeks)

Read scales on measuring equipment like rulers, weighing scales, thermometers and measuring cylinders to the nearest numbered unit where the divisions are in ones, twos, fives and tens using standard units
Compare and order measurements and record the results using >, < and =

Compare mass
Measure in grams
Measure in kilograms
Four operations with mass
Compare volume and capacity
Measure in millilitres
Measure in litres
Four operations with volume and capacity
Temperature

Statistics- 2 weeks

Find information from pictograms, tally charts, block diagrams and simple tables
Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
Show information in pictograms, tally charts, block diagrams and simple tables
Make tally charts
Draw pictograms (1-1)
Interpret pictograms (1-1)
Draw pictograms (2,5 and 10)
Interpret pictograms (2, 5 and 10)

Number: Fractions-3 weeks

Find and name 1/2, 1/3, 1/4 , 2/4, and 3/4 of a length, shape, set of objects or quantity
Write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of two quarters to one half
Make equal parts
Recognise a half
Find a half
Recognise a quarter
Find a quarter
Recognise a third
Find a third
Unit factions
Non-unit fractions
Equivalence of 1/2 and 2/4
Find three quarters
Count in fractions

Geometry: Position & Direction-2 weeks

Describe how an object is turning using words like: right angle, clock-wise, anti-clockwise, quarter turn, half turn and three quarter turn
Describing movement
Describing turns
Describing movement and turns
Making patterns with shapes

Problem Solving (2 weeks)

Measurement: Time – 2 weeks

Tell and write the time at quarter past/to the hour and draw hands on a clock face to show these times
Tell and write the time to 5 minute intervals past/to the hour and draw hands on a clock face to show these times
Say the number of minutes in an hour and the number of hours in the day
Compare and sequence intervals of time

O'clock and half past
Quarter past and quarter to
Telling time to 5 minutes
Hours and days
Find durations of time
Compare durations of time

Year 3

3	**Number: Place Value- 3 weeks** *Say the value of each digit in a 3-digit number (hundreds, tens, ones)* *Find 10 or 100 more or less of a given number* *Read, write, compare and order numbers up to 1,000* *Solve number problems (including missing number problems) and practical problems by using knowledge of number facts and place value.* *Use diagrams, measuring equipment and written methods to support (Number facts include addition and subtraction facts, multiplication and division facts and inverse operations)* Hundreds Represent numbers to 100 Partition numbers to 100 Number line to 100 Hundreds Represent numbers to 1,000 Partition numbers to 1,000 Flexible partitioning of numbers to 1,000 Hundreds, tens and ones Find 1, 10, 100 more or less Number line to 1,000 Estimating on a number line to 1,000 Compare numbers to 1000 Order numbers to 1,000 Count in 50s **Number: Addition & Subtraction (3 weeks)** Apply number bonds within 10 Add and subtract 1s Add and subtract 10s Add and subtract 100s Spot the pattern Add 1s across 10 Add 10s across 100 Subtract 1s across 10 Subtract 10s across 100 Make connections	**Number: Addition & Subtraction (2 weeks)** *Use column addition and column subtraction to add and subtract 3-digit numbers* *Add and subtract ones, tens and hundreds to and from any 3-digit number* *Estimate the answer to a calculation and use inverse operations to check answers (NPV)* Add two numbers (no exchange) Subtract two numbers (no exchange) Add two numbers (across a 10) Add two numbers (across 100) Subtract two numbers (across 10) Subtract two numbers (across 100) Add a 2-digit and 3-digit numbers Subtract a 2-digit number from a 3-digit number Complements to 100 Estimate answers Inverse operations Make decisions **Number: Multiplication & Division (4 weeks)** *Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables* *Count in multiples of 4, 8, 50 and 100* Multiplication- equal groups Use arrays Multiples of 2 Multiples of 5 and 10 Sharing and grouping Multiply by 3 Divide by 3 The 3 times table Multiply by 4 Divide by 4 The 4 times table Multiply by 8 Divide by 8 The 8 times table The 2, 4 and 8 times table	**Number: Multiplication & Division (3 weeks)** Multiples of 10 Related calculations Reasoning about multiplication Multiply a 2-digit number by a 1-digit number - no exchange Multiply a 2-digit number by a 1-digit number - with exchange Link multiplication and division Divide a 2-digit number by a 1-digit number - no exchange Divide a 2-digit number by a 1-digit number - flexible partitioning Divide a 2-digit number by a 1-digit number - with remainders Scaling How many ways? **Measurement: Length & Perimeter (3 weeks)** *Measure, compare, add and subtract: lengths (m/cm/mm), mass (kg/g); volume/capacity (l/ml)* *Read and give the full names for abbreviations for metric units of measure* *Measure the perimeter of simple 2-D shapes using the best standard unit* Measure in metres and centimetres Measure in millimetres Measure in centimetres and millimetres Metres, centimetres and millimetres Equivalent lengths (metres and centimetres) Equivalent lengths (centimetres and millimetres) Compare lengths Add lengths Subtract lengths What is perimeter? Measure perimeter Calculate perimeter	**Number: Fractions (3 weeks)** *Explain and use the language of fractions including denominator and numerator* *Add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7 = 6/7)* *Count up and down in tenths* *Show that tenths that arise from dividing a single digit number or a quantity by 10 are represented by a decimal number* *Show that tenths that arise from dividing an object into 10 equal parts are represented by a fraction* *Recognise, find and write fractions of a discrete set of objects or numbers using fractions with a small denominator or a denominator of 1 and put these in order* Understand the denominators of unit fractions Compare and order unit fractions Understand the numerator of non-unit fractions Understand the whole Compare and order non-unit fractions Fractions and scales Fractions on a number line Count in fractions on a number line Equivalent fractions on a number line Equivalent fractions as bar models ***Measurement: Mass & Capacity (3 weeks)*** *Measure, compare, add and subtract: lengths (m/cm/mm), mass (kg/g); volume/capacity (l/ml)* *(Also, in Measurement-length and perimeter)* Use scales Measure mass in grams Measure mass in kilograms and grams Equivalent masses (kilograms and grams) Compare mass Add and subtract mass Measure capacity and volume in millilitres Measure capacity and volume in litres and millilitres Equivalent capacities and volumes (litres and millilitres) Compare capacity and volume Add and subtract capacity and volume	**Number: Fractions (2 weeks)** *Recognise and show equivalent fractions with small denominators using diagrams* *Compare and order fractions with the same denominator* *Solve problems that involve fractions, including equivalent fractions and addition of fractions* Equivalent fractions (1) Equivalent fractions (2) Equivalent fractions (3) Compare fractions Order fractions Add fractions Subtract fractions **Measurement: Money (2 weeks)** *Add and subtract amounts of money to give change, using both £ and p. in practical contexts* Pounds and pence Convert pounds and pence Add money Subtract money Give change **Measurement: Time (1 week)** *Compare time in terms of seconds, minutes, hours and o'clock/ time of day* *Read time to the nearest minute on an analogue clock* *Use vocabulary such as am, pm, morning, afternoon, noon and midnight* *Compare durations of events, for example to calculate the time taken up by particular events or tasks* *Recall the number of seconds in a minute and the number of days in each month, year and leap year* Months and years Hours in a day Telling the time to 5 minutes Telling the time to the minute Using a.m. and p.m. 24-hour clock Finding the duration Comparing durations Start and end times Measuring time in seconds	**Measurement: Time (2 weeks)** 24-hour clock Finding the duration Comparing durations Start and end times Measuring time in seconds ***Geometry:* Properties of Shape (2 weeks)** *Say how many right angles make up quarter, half, three-quarter and full turns* *Describe compass positions in terms of right-angled turns and half turns* *Say whether an angle is less than or greater than a right angle* *Describe angles in terms of measurements of turning e.g. four right angles make full turn, a right angle is a quarter turn, a given angle is more or less than a quarter turn* *Label horizontal, vertical, perpendicular and parallel lines in relation to other lines* *Recognise 2-D and 3-D shapes in different orientations, and describe them accurately in terms of faces, edges, vertices and lines of symmetry* *Draw 2-D and make 3-D shapes using modelling materials and name these shapes in different orientations* Turns and angles Right angles in shapes Compare angles Draw accurately Horizontal and vertical Parallel and perpendicular Recognise and describe 2D shapes Recognise and describe 3D shapes Make 3D shapes **Statistics (2 weeks)** *Present data using simple bar charts, pictograms and tables* *Solve one-step and two-step questions such as "Which has the most?" and "How many more?" using information presented in scaled bar charts and pictograms and tables* Pictograms Bar charts Tables **CONSOLIDATION (1 weeks)**

Year 4

4

Number: Place Value (4 weeks)
Round any number to 10, 100 or 1 000
Recognise the place value of each digit in any 4-digit number
Explain how the number system has changed over time to include the concept of zero and place value
Add and subtract multiples of 10, 100 or 1 000 to any given 4-digit number
Name, order and compare numbers above 1000
Count in multiples of 6, 7, 9, 25 and 1 000
Count backwards through zero to include negative numbers
Represent numbers to 1,000
Partition numbers to 1,000
Number line to 1,000
Thousands
Represent numbers to 10,000
Find 1, 10,100, 1,000 more of less
Number line to 10,000
Compare numbers to 10,000
Estimate on a number line to 10,000
Compare numbers to 10,000
Order numbers to 10,000
Roman numerals
Round to the nearest 10
Round to the nearest 100
Round to the nearest 1,000
Round to the nearest 10, 100 or 1,000

Addition & Subtraction (2 weeks)
Use column addition and column subtraction to add and subtract numbers with up to 4-digits
Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and explaining why
Estimate the answer to, and solve problems, involving multiplying and adding, including the distributive law and harder multiplication problems such as 'which n objects are connected to which m objects' (Harder multiplications include 2-digit x 2-digit and 2-digit x 3-digit problems
Estimate the answer to, and solve, number and practical problems that involve making decisions about applying number facts, place value, rounding and estimation with numbers greater than 1,000 (NPV)
Check my answers using estimates and by applying inverse operations
Add and subtract 1s, 10s, 100s, and 1000s
Add two 4-digit numbers- no exchange
Add two 4-digit numbers- one exchange
Add two 4-digit numbers- more than one exchange
Subtract two 4-digit numbers – no exchange
Subtract two 4-digit numbers – one exchange
Subtract two 4-digit numbers – more than one exchange

Addition & Subtraction (1 week)
Efficient subtraction
Estimate answers
Checking strategies

Measurement: Area (1 week)
Estimate and find the area of squares, rectangles and related composite shapes by counting standard units, including centimetre squared (cm2) and metre squared (m2)

What is area?
Counting squares
Making shapes
Comparing area

Number: Multiplication & Division 1 (3 weeks)
Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1
Use place value, known and derived facts to multiply and divide mentally, including: dividing by 1
Recall and use multiplication and division facts for multiplication tables up to 12 x 12
Multiples of 3
Multiply and divide by 6
6 times table and division facts
Multiply and divide by 9
9 times table and division facts
The 3, 6 and 9 times tables
Multiply and divide by 7
7 times table and division facts
11 times table and division facts
12 times table and division facts
Multiply by 1 and 0
Divide by 1 and itself
Multiply three numbers

1 week : Consolidation week

Number: Multiplication & Division 2 (3 weeks)
Use place value, known and derived facts to multiply and divide mentally, including: doubling and halving any number
Use place value, known and derived facts to multiply and divide mentally, including: multiplying together three numbers
Explain, using place value knowledge, the effect of dividing any number by 10 and 100 on the number and the digits in the number (NPV)Multiply or divide 2-digit and 3-digit numbers by a 1-digit number using efficient written methods
Factor pairs
Use factor pairs
Multiply by 10
Multiply by 100
Divide by 10
Divide by 100
Related facts – multiplication and division
Informal written methods for multiplication
Multiply a 2-digit number by a 1-digit number
Multiply a 3-digit number by a 1-digit number
Divide a 2-digit number by a 1-digit number (1)
Divide a 2-digit number by a 1-digit number (2)
Divide a 3-digit number by a 1-digit number
Correspondence problems
Efficient multiplication

Measurement: Length & Perimeter (2 weeks)
Estimate, compare and calculate with measures of length, mass and capacity
Convert between different units of measure for length, mass, capacity and time
Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
Measure in kilometres and metres
Equivalent lengths (kilometres and metres)
Perimeter on a grid
Perimeter of a rectangle
Perimeter of rectilinear shapes
Find missing lengths in rectilinear shapes
Calculate the perimeter of rectilinear shapes
Perimeter of regular polygons
Perimeter of polygons

Number: Fractions (1 week)
Understand the whole
Count beyond 1
Partition a mixed number
Number lines with mixed numbers

Number: Fractions (3 weeks)
Compare and order mixed numbers
Understand improper fractions
Convert mixed numbers to improper fractions
Convert improper fractions to mixed numbers
Equivalent fractions on a number line
Equivalent fraction families
Add two or more fractions
Add fractions and mixed numbers
Subtract two fractions
Subtract from whole amounts
Subtract from mixed numbers

Number: Decimals (3 weeks)
Count up and down in hundredths (fractions)
Recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten (fractions)
Round decimals with one decimal place to the nearest whole number
Recognise and write decimal equivalents of n/10 and n/100 (Fractions)

Tenths as fractions
Tenths as decimals
Tenths on a place value chart
Tenths on a number line
Divide a 1-digit number by 10
Divide a 2-digit number by 10
Hundredths as fractions
Hundredths as decimals
Hundredths on a place value chart
Divide a 1- or 2-digit number by 100

Number: Decimals (2 weeks)
Read, write, compare and order numbers with the same number of decimal places up to two decimal places
Make a whole
Write decimals
Compare decimals
Order decimals
Round decimals
Halves and quarters

Measurement: Money (2 weeks)
Pounds and pence
Ordering money
Estimating money
Four operations

Measurement: Time (2 weeks)
Identify, represent and estimate numbers using different representations – for example numbers used within different measurement scales such as time, temperature and weight
Solve problems including converting from hours to minutes; minutes to second; years to months; weeks to days
Read, write, convert time between analogue and digital 12 hour clocks
Read, write, convert time between analogue and digital 12 and 24 hour clocks
Estimate, compare and calculate with measures of time (including the 12 and 24 hour clock)
Hours, minutes and seconds
Years, months, weeks and days
Analogue to digital – 12 hour
Analogue to digital – 24 hour

Consolidation weeks 1 week

Geometry: Properties of shapes (2 weeks)
Identify acute and obtuse angles and compare and order angles by size up to two right angles
Compare and classify geometric shapes, including quadrilaterals and triangles based on their properties and sizes
Identify lines of symmetry in 2-D shapes presented in different orientations, and complete symmetry diagrams for specific lines of symmetry
Plot specified points and draw sides to complete a given polygon
Identify angles
Compare and order angles
Triangles
Quadrilaterals
Lines of symmetry
Complete a symmetric figure

Statistics (3 weeks)
Interpret and present discrete data using bar charts
Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs
Interpret and present continuous data using appropriate graphical methods e.g. time graphs
Comparison, sum and difference
Line graphs

Geometry: Position and Direction (2 weeks)
Describe positions, and movements between positions, on a 2-D grid, and as coordinates in the first quadrant
Calculate the angle of turn associated with movement between any of the eight compass points
Describe movements between positions as translations of a given unit to the left/right and up/down
Describe position
Draw on a grid
Move on a grid
Describe a movement on a grid

Year 5

5

Number: Place Value (3 WEEKS)
Read, write, order, compare and round numbers to at least 1,000,000 and determine the value of each digit
Read Roman numerals to 1000 (M) and years written in Roman numerals
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000
Estimate the answer to, and solve, number and practical problems that involve numbers up to 1 000 000
Round numbers to at least 1,000,000 and determine the value of each digit
Interpret negative numbers in context, and count forwards and backwards with positive and negative whole numbers through zero
Roman Numerals to 1000
Numbers to 10000
Numbers to 100000
Numbers to 1,000, 000
Read and write numbers to 1,000,000
Powers of 10
10/100/1000/10,000/100,000 more of less
Partition numbers to 1,000,000
Number line 1,000,000
Compare and order numbers to 100,000
Round numbers within 1,000,000
Round to the nearest 10, 100, 1,000
Round within 100,000
Round within 1, 000, 000

Number: Addition and Subtraction (2 WEEKS)
Add and subtract whole numbers with more than 4 digits using efficient written methods (columnar addition and subtraction)
Add and subtract numbers mentally with increasingly large numbers
Estimate the answer to, and solve, number and practical problems that involve numbers up to 1 000 000 (From NPV)
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy (In NPV)
Solve single- and multi-step practical problems involving a combination of addition, subtraction, multiplication and division calculations, including understanding the meaning of the equals sign (From NPV)
Explain my choice of calculation when solving single- and multi-step problems (From NPV)

Mental strategies
Add whole numbers with more than 4 digits
Subtract whole numbers with more than 4 digits
Round to check answers
Inverse operations (addition and subtraction)
Multi-step addition and subtraction problems
Compare calculations
Find missing numbers

Multiplication and Division (1 WEEK)
Multiples
Common multiple Factors Common Factors

Number: Multiplication and Division (3 WEEKS)
Explain what the vocabulary of prime numbers means including prime number, prime factor and composite (non-prime) number
Explain what the vocabulary of prime numbers means including prime number, prime factor and composite (non-prime) number
Recognise and use square numbers and square roots, and the notation for squared (2) and cubed (3)
Prime numbers
Square numbers
Cube numbers
Multiply by 10, 100 and 1000
Divide by 10, 100 and 1000
Multiples of 10, 100 and 1000

Number: Fractions (4 weeks)
Name and write equivalent fractions of a given fraction, including tenths and hundredths
Add and subtract fractions with the same denominator and related fractions including writing mathematical statements that exceed 1 as a mixed number: (e.g. 2/5 + 4/5 = 6/5 = 11/5)
Convert mixed numbers and improper fractions from one form to the other
Compare and order fractions whose denominators are all multiples of the same number

Find fractions equivalent to a unit fractions
Find fractions equivalent to a non-unit fraction
Recognise equivalent fractions
Convert improper fraction to mixed numbers
Convert mixed numbers to improper fractions
Compare fractions less than 1
Order fractions less than 1
Compare and order fraction greater than 1
Add and subtract fractions with the same denominator
Add fractions within 1
Add fractions with a total greater than 1
Add to a mixed number
Add two mixed numbers
Subtract fractions
Subtract from a mixed number
Subtract from a mixed number – breaking the whole
Subtract two mixed numbers

Number: Multiplication and Division (2) (3 WEEKS)
I can multiply numbers with at least 4-digits by a 2-digit whole number using long multiplication
I can divide numbers up to 4-digits by a 2-digit whole number using long division, and interpret remainders as whole number remainders, fractions, decimals or by rounding as appropriate for the context

Multiply up to a 4-digit number by a 1-digit number
Multiply a 2-digit number by a 2-digit number (area model)
Multiply a 2-digit number by a 2-digit number
Multiply a 3-digit number by a 2-digit number
Multiply a 4-digit number by a 2-digit number
Solve problems with multiplication
Short division
Divide a 4-digit number by a 1-digit number
Divide with remainders
Efficient division
Solve problems with multiplication and division

Number: Fractions (2 WEEKS)
Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5 and 4/5 and those fractions with a denominator of a multiple of 10 or 25
Solve problems involving multiplication and division including scaling by simple fractions and problems involving simple rates
Multiply a unit fraction by an integer
Multiply a non-unit fraction by an integer
Multiply a mixed number by an integer
Calculate a fraction of a quantity

Fraction of an amount
Find the whole
Use fractions as operators

Decimals and Percentages (3 WEEKS)
Read and write decimal numbers as fractions e.g. 0.71 = 71/100

Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
Round decimals with two decimal places to the nearest whole number or to the first decimal place
Read, write, order, compare and round numbers with up to three decimal places
Explain what the percent symbol means and relate my understanding to parts of a whole number or a whole quantity
Write simple fractions and decimals as percentages (e.g. ½ = 0.5 =50% = 50/100)
Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5 and 4/5 and those fractions with a denominator of a multiple of 10 or 25
Decimals up to 2 decimal places
Equivalent fractions and decimals (tenths)
Equivalent fractions and decimals (hundredths)
Equivalent fractions and decimals
Thousandths as fractions
Thousandths as decimals
Thousandths on a place value chart
Order and compare decimals (same number of decimal places)
Order and compare any decimals with up to 3 decimal places
Round to the nearest whole number
Round to 1 decimal place
Understand percentages
Percentages as fractions
Percentages as decimals
Equivalent fractions, decimals and percentages

Measurement: Perimeter and Area (2 WEEKS)
Prove that shapes with the same areas can have different perimeters and vice versa
Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
Calculate and compare the area of squares, rectangles and related composite shapes using standard units, including centimetre squared (cm2) and metre squared (m2) and estimate the area of irregular shapes
Perimeter of rectangles
Perimeter of rectilinear shapes
Perimeter of polygons
Area of rectangles
Area of compound shapes
Estimate area

Statistics (2 WEEK)
Solve comparison, sum and difference problems using information presented in line graphs
Draw line graphs
Read and interpret line graphs
Complete, read and interpret information in tables, including timetables
Read and interpret tables
Two-way tables
Read and interpret timetables

Geometry: Properties of shape (3 WEEKS)
Draw shapes from given dimensions and angles
Use the properties of rectangles to deduce related facts and find missing lengths and angles
Distinguish between regular and irregular polygons based on reasoning about equal sides and angles
Calculate angles where there are two or more angles on a straight line or ½ turn (180o) and where there are two or more angles in a whole turn (360o)
Estimate a given angle in degrees (0) and say if the angle is an acute, reflex, obtuse, right angle or multiples of 90o
Identify 3-D shapes, including cubes and cuboids, from 2-D representations
Measuring angles in degrees
Measuring with a protractor (1)
Measuring with a protractor (2)
Drawing lines and angles accurately
Calculating angles on a straight line
Calculating angles around a point
Calculating lengths and angles in shapes
Regular and irregular polygon
Reasoning about 3D shapes

Geometry: Position and Direction (2 Weeks)
Identify, describe and represent the position of a shape following a reflection or translation using the appropriate vocabulary, and know that the shape has not changed
Position in the first quadrant
Reflection
Reflection with co-ordinates
Translation
Translation with co-ordinates

Number: Decimals (3 WEEKS)
Solve problems involving numbers up to three decimal places
Adding decimals within 1
Subtracting decimals within 1
Complements to 1
Adding decimals- crossing the whole
Adding decimals with the same number of decimal places
Subtracting decimals with the same number of decimal places
Adding decimals with a different number of decimal places
Subtracting decimals with a different number of decimal paces
Adding and subtracting wholes and decimals
Decimal sequences
Multiplying decimals by 10, 100 and 1000
Dividing decimal by 10, 100 and 1000

Negative Numbers (1 week)

Measurement: Converting Units (2 WEEKS)
Say what the equivalences are between common metric and imperial units and estimate equivalences of a given measure e.g. inches, pints and pounds
Solve problems converting between the units of time
Measure force in Newtons (N)
Kilograms and kilometres
Milligrams and millilitres
Metric units
Imperial units
Converting units of time
Timetables

Measurement: Volume (1 WEEK)
Estimate and calculate the volume of cuboids (including cubes) and the capacity of liquids
What is volume?
Compare volume
Estimate volume
Estimate capacity

Year 6

6	**Number: Place Value (2 weeks)** *Read, write, order and compare numbers up to 10 million and determine the value of each digit* *Add, subtract and use negative numbers in context, and calculate intervals across zero* *Perform mental calculations, including with mixed operations and large numbers* *Use my knowledge of the order of operations to carry out calculations involving the four operations* *Follow the order of operations in calculations, and where there are brackets do these first e.g. 2 + (3 x 4) – 9 = 5* *Identify common factors, common multiples and prime numbers* *Read, write, order and compare numbers up to 10 million and determine the value of each digit* *Add, subtract and use negative numbers in context, and calculate intervals across zero* *Use estimation to check answers to calculations and determine an appropriate level of accuracy* *Round any number to any given degree of accuracy* *Solve problems which require answers to be rounded to specified degrees of accuracy* *Use formal written methods to solve multistep problems, using all four operations e.g. A two litre bottle of drink is used to fill cups of* 150ml, how much will be left? Solve problems that involve calculating intervals across zero Numbers to 1,000,000 Numbers to 10,000,000 Read and write numbers to 10,000,000 Powers of 10 Number line to 10,000,000 Compare and order integers Negative numbers **Addition, Subtraction, Multiplication & Division (4 weeks)** Mental calculations and estimation *Add, subtract and use negative numbers in context, and calculate intervals across zero* *I can multiply numbers with at least 4-digits by a 2-digit whole number using long multiplication* *I can divide numbers up to 4-digits by a 2-digit whole number using long division, and interpret remainders as whole number remainders, fractions, decimals or by rounding as appropriate for the context* *Use written division methods in cases where the answer has up to 2 decimal places* *Identify common factors, common multiples and prime numbers (from NPV)* *Follow the order of operations in calculations, and where there are brackets do these first e.g. 2 + (3 x 4) – 9 = 5 (from NPV)*	**Fractions (4 weeks)** *Use common factors to simplify fractions and use common multiples to express fractions in the same denomination* *Compare and order any fraction, 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 (e.g. ¼ x ½ = 1/8)* *Divide proper fractions by whole numbers (e.g. 1/3 ÷2 = 6)* *Recall and use equivalences between simple fractions, decimals and percentages including in different contexts* Equivalent fractions and simplifying Equivalent fractions on a number line Compare and order (denominator) Compare and order (numerator) Add and subtract simple fractions (1) Add and subtract any two fractions Add mixed numbers Subtract mixed numbers Multi step problems Multiply fractions by integers Multiply fractions by fractions Divide fractions by integers Divide any fraction by integers Mixed questions with fractions Fraction of an amount Fraction of an amount – find the whole **Measurement: Converting Units (1 week)** *Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, including between miles and kilometres using decimal notation to three decimal places* *Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate* *Convert measurements of distance between miles and kilometres* Metric measures Convert metric measures Calculate with metric measures Miles and kilometres Imperial measures	**Number: Ratio (2 weeks)** *Recognise equivalent ratios and reduce a given ratio to its lowest terms* *Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts* *Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples* *Solve problems involving similar shapes where the scale factor is known or can be found* Add or multiply? Use ratio language Introduction to the ratio symbol Ratio and fractions Scale drawing Use scale factors Similar shapes Ratio problems Proportion problems Recipes **Number: Algebra (2 weeks)** *Generate and extend linear number sequences* *Express missing number problems algebraically* *Use a simple formula to find an answer to a problem e.g. distance travelled over a time at given speeds, area of a rectangle or triangle* *Find pairs of numbers that satisfy number sentences involving two unknowns* *Make a table showing a range of outcomes from applying a rule to two variables (e.g. multiply and add 2)* 1-step function machines 2-step function machines Form expressions Substitution Formulae Form equations **Number: Decimals (2 weeks)** *Multiply and divide numbers up to three decimal places by 10, 100 and 1 000 where the answers are up to three decimal places* *Multiply 1-digit numbers with up to two decimal places by whole numbers* *Calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8) and explain how I've done it* Place value within 1 Place value – integers and decimals Round decimals Add and subtract decimals Multiply by 10, 100 and 1,000 Divide by 10, 100 and 1,000 Multiply decimals by integers Divide decimals by integers Multiply and divide decimals in context	**Number: Fractions, decimals and percentages (2 weeks)** *Use percentages for comparison and calculate percentages of whole numbers or measures such as 15% of 360* Decimal and fraction equivalents Fractions as division Understand percentages Fractions to percentages Equivalent fractions, decimals and percentages Order fractions, decimals and percentages Percentage of an amount – one step Percentage of an amount – multi-step Percentages – missing values **Measurement: Perimeter, Area and Volume (2 weeks)** *Recognise when it is necessary to use the formulae for area and volume of shapes* *Calculate the area of parallelograms and triangles* *Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm3) and cubic metres (m3) and extending to other units, such as mm3 and km3* Shapes - same area Area and perimeter Area of a triangle – counting squares Area of a right-angled triangle Area of any triangle Area of a parallelogram Volume - counting cubes Volume of a cuboid **Statistics (2 weeks)** Line graphs Dual bar charts Read and interpret pie charts Pie charts with percentages Draw pie charts The mean	**Geometry: Properties of Shape** *Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons* Measure with a protractor Introduce angles Calculate angles Vertically opposite angles Angles in a triangle Angles in a triangle – special cases Angles in a triangle – missing angles Angles in special quadrilaterals Angles in regular polygons Draw shapes accurately Draw nets of 3-D shapes **Geometry: Position & Direction (1 week)** *Describe positions on the full coordinate grid (all four quadrants)* *Construct, translate and reflect simple shapes on the coordinate plane and reflect them in the axes* The first quadrant Four quadrants Translations Reflections Consolidation or SATS preparation	**Preparation for KS3 Investigations and problem solving** **Problem solving- 3 weeks** **Investigations-4 weeks**

	Use my knowledge of the order of operations to carry out calculations involving the four operations *Perform mental calculations, including with mixed operations and large numbers (from NPV)* *Use estimation to check answers to calculations and determine an appropriate level of accuracy* Add and subtract integers Common factors Common multiples Rules of divisibility Primes to 100 Square and cube numbers Multiply up to a 4-digit number by a 2-digit number Solve problems with multiplication Short division Introduction to long division Long division with remainders Solve problems with division Solve multi step problems Order of operations Mental calculations and estimation Reason from known facts					