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|  | Class 1 | Class 2 | Class 3 | Class 4 |
| Autumn 1 | **Number** – Counting in rote.Counting objects that can be moved as well as static objects, understanding that the final number is the total.Counting for a purpose e.g. how many children are here today?Matching numerals to amounts, understand that numerals are a label and only mean something when matched to their value.**Shape, Space and Measure** - Repeating patterns using colours, shape and objects.Finding patterns in everyday life e.g. carpets, clothing, animals. | **Place value**Pupils are able to read and write numbers up 20 (Year1) or 100 (Year 2)**Year 1** identify and represent numbers using objects and – counting numbers up to 20, using pictorial representations Ordering numbers up to 20Count in multiples of 2s, 5, and 10s **Year 2** counting in multiples of 2,3,5 and 10To understand the value of digits in a 2 digit numbers – partition numbers in different ways. Ordering numbers up to 100**Addition/subtraction****Year 1 –**number bonds to 10 including subtraction facts within 10To understand number facts for + and –Add and subtract one digit numbers to 10 – finding one more or one less**Year 2**Number bonds to 20 / 100 including subtraction factsTo add 2 digit numbers and multiples of 10To add 2 digit numbers and 2 digit numbersTo understand that addition is commutativeTo use a bar model and write number facts using + and - | **Place Value** – able to read and write numbers up to 1000 in numerals and in words (beyond 1000 – year 4). Recognising the place value of each digit for a three-digit number (year 3) and four-digit number (year 4). Finding 10 or 100 more or less than a given number (year 4 - 1000 more). Year 4 to round numbers to the nearest 10, 100 and 1000 and decimal rounding. Year 4 to count backwards through zero including negative numbers. **Addition** – adding numbers mentally (3 digit number and one, 3 digit number and tens, 3 digit number and hundreds – Year 3) and (adding numbers with 4 digits). Using written methods like column addition. Estimating answers and using inverse to find the answer.  | **Place Value-** Pupils are able to read and write numbers up to 1, 000, 000 (10,000,000 in Year 6) and determining the value of each digit. Pupils can order and compare these numbers. Pupils can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.They can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. Pupils solve number problems and practical problems that involve all of the above. Year 5 to read Roman numerals to 1000 (M) and recognise years written in Roman numerals.**Addition and subtraction-** pupils can add and subtract whole numbers with more than 4 digits, including using formal written methods to add and subtract numbers mentally with increasingly large numbers. Pupils taught to use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Pupils can solve addition and subtraction problems in contexts. |
| Autumn 2 | **Number** – Using counting skills to support their understanding of 1 more and 1 less. Understanding that 1 less means to take away and we will have fewer in the end. Also to link the skill of counting backwards to help them with this. Using everyday contexts as to why we need to be able to do this e.g. when someone isn’t here. Children to understand 1 more means we will have a greater amount and that 1 more is the next number.Ordering numbers and understanding the importance of ordering numbers correctly. **Shape, Space and Measure** – Understanding that everything around us is made up of shapes. To name and identify 2D and 3D shapes in their environment.Being able to name and identify the properties of the shapes.Understanding what weight, capacity and length is and what we use to measure these and why.Understanding and using the vocabulary related to the different types of measuring. | **Multiplication and Division****Year 1**To count in 2s,5s and 10sTo understand and add equal groupsTo make arrays with equipmentTo understand doubling and halving**Year 2**To recognise equal groups and add equal groupsTo use the multiplication symbol and use arrays to find the sumTo understand halving and doubling**Shape and pattern****Year 1**To recognise and name 2D and 3D shapesRecognise the shapes in different orientations and sizes**Year 2**Identify and describe the properties of 2D shapes including lines of symmetry**.** Read and write the names 2D and 3D shapesIdentify and describe the properties of 3D shapes including the number of edges, vertices and facesCompare and sort 2D and 3D shapes and everyday objects and to identify the 2D shape on the surface of a 3D shape**Money****Year 1**To recognise and know the value of different coinsTo use coins to make given amounts in purses and to find the total of given prices**Year 2**To recognise and use symbols £ and p and combine coins to make a particular valueTo find different combinations of coins that equal the same amounts of moneyChildren can add different amounts to find the total through problem solving and puzzles**Fractions****Year 1** To understand ½ and ¼ of a shape and numberYear 2To understand ½, ¼,3/4 and 1/3 of a shape or numbers | **Subtraction -** subtracting numbers mentally (3 digit number and one, 3 digit number and tens, 3 digit number and hundreds – Year 3) and (subtracting numbers with 4 digits). Using written methods like column subtraction. Estimating answers and using inverse to find the answer.**Multiplication** – Looking at efficient methods for multiplying by 3, 4 and 8 (year 3) and all times tables (year 4). Using place value columnsto multiplying by 10/100. Use grid method to multiplying 2 digit numbers by 1 digit numbers. | **Multiplication and Division-** Pupils can identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. They know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers and establish whether a number up to 100 is prime and recall prime numbers up to 19. Pupils are able to multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. They can multiply and divide numbers mentally drawing upon known facts. Pupils are taught to divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. Pupils can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 and the notation for squared ( 2 ) and cubed (3 ). They can solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes**Data handling-** read andinterpret information from line graphs and solve problems related to such. Pupils to complete, read and interpret information in tables, including timetables. Year 6 pupils to calculate the mean as an average. Year 6 pupils can interpret and construct line graphs and pie charts and use these to solve problems. **Fractions**- Year 5 pupils- compare and order fractions whose denominators are all multiples of the same number. They can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. Pupils to recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 5 2 + 5 4 = 5 6 = 1 5 1 ]Year 6 pupils taught to use common factors to simplify fractions; use common multiples to express fractions in the same denomination and compare and order fractions, including fractions > 1. They can add and subtract fractions with the same denominator (year 5) or denominators are multiples of the same number (year 5) Year 6 pupils can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions |
| Spring 1 | **Number** – Using place value to help them order numbers at random.Using counting skills to work out which numbers will come next and which are missing.Using practical apparatus and number tracks to solve addition and subtraction number sentences.Understand the symbols of + - and =.Understanding the vocabulary related to addition and subtraction to know what they need to do to solve given word problems.**Shape, Space and Measure** - Understanding the importance of using positional language correctly.To be able to give and follow positional language.To name and identify 2D and 3D shapes in their environment.Being able to name and identify the properties of the shapes. | Addition and Subtraction**Year 1**To add 2 or 3 numbers to find a total. To use a number line to add or subtract single digit numbers. To write the number facts using a bar model.To use Base 10 to add a 2 digit and a 1 digitTo use apparatus or a number line to subtract a number up to 20. To use bar model for missing numbers**Year 2**To add and subtract 2digit +1 digit or 2digit +2digit using Base 10 equipment or column method including regroupingTo check using the inverse operationTo use bar model to find missing numbers and complex missing number equations**Place value**Pupils are able to read and write numbers up 20 (Year1) or 100 (Year 2)**Year 1** identify and represent numbers using objects and – counting numbers up to 20, using pictorial representations Ordering numbers up to 20Count in multiples of 2s, 5, and 10s Represent a teens number using Base 10**Year 2** counting in multiples of 2,3,5 and 10To understand the value of digits in a 2 digit numbers – partition numbers in different ways. Ordering numbers up to 100**Time****Year 1** To understand days of the weeks and months of the year. To tell the time for o`clock and half past. Pupils understand the different hands on the clock.**Year 2**To understand the days of the week and months of the year. To understand minutes for hour and half hour and hours in a day.Pupils can tell the time for o`clock, half past, quarter past and quarter to. To tell the time to 5 minute intervals. | **Division-** Looking at efficient methods for dividing by 3, 4 and 8 (year 3) and all times tables (year 4) .Using place value columnsto divide by 10/100. Use arrow method to divide 2 digit numbers by 1 digit numbers.**Perimeter/Area/Measures-** Practical investigations on measuring different objects in both mm and cm and trying to prove 2 things might be in correlation, e.g. head span and hand span. Children to then convert measurements and look at real life examples, such as ingredients for a cake. Children to count squares to find area in year 4 and begin to use the formula to find the area. All children to understand that perimeter is a measurement of the outside of a shape. | Fraction continuation…multiply simple pairs of proper fractions, writing the answer in its simplest form,  divide proper fractions by whole numbers. Pupils can associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 8 3]**Percentages**Pupils taught equivalence between fractions, decimals and percentages. They can identify a percentage as parts per 100. They can associate and pictorial show 25% as 25/100 or ¼ etc. Pupils are taught to calculate a percentage of an amount or quantity and solve single and multi-step worded problems including percentages. **Measures**Pupils are taught to convert between units of measure (kg-g, ml-l, cm-m etc) Pupils can also convert between metric units of measure and standard imperial measures. Pupils are taught to calculate the perimeter (recap) and area of complex shapes, triangles, trapeziums, parallelograms and a rhombus. They can also calculate the volume and capacity and solve problems relating to each.  **(Revision of time as intervention)** |
| Spring 2 | **Number** – Children to understand that number bonds are 2 numbers that go together to make a total. Children to use numicon, apparatus and counting on to be able to recall the number bonds to 5/10.Sharing different amount using practical activities, knowing that each group has got to be fair, equal and the same. Children to share objects fairly, 1 at a time ad check the total of each group once finished.Halving objects and amounts. Understanding when halving objects/shapes and pictures, that both halves have got to be exactly the same. Then knowing that to halve an amount, they need to share into 2 groups to ensure both halves are exactly the same.Understanding doubling as ‘the same again’. Seeing doubling in everyday context e.g. double bed, double decker bus and knowing how to double amounts. | **Measurements – length**Compare/describe and solve practical problems for length and heightTo use comparative symbols for different lengths/weights.Measure and record lengthsReading scales when all numbers are on the scale and also when some are missing.Multiplication and Division**Year 1**To use arrays to show equations for multiplication and to understand multiplication is commutativeTo use apparatus and arrays to find the sumTo understand division as sharing and use equipment for practical tasks**Year 2**To use number lines to solve multiplication and divisionTo understand the relationship between multiplication and division and write number facts. To use knowledge of multiples make prediction of larger numbers**Fractions**To revise the fractions for shapes and numbers | **Fractions-** All children to add and subtract fractions and to be able to use pictorial representation to find equivalent fractions. Children to be able to find fractions of quantities. All above should show reasoning and problem solving questions at every level.**Decimals-** Year 4s to look at decimal equivalents and the effect of when a number or fraction is divided by 10 or 100.**Statistics-** investigation into sugary drinks. Children to collect data on how many sugary snacks are eaten. Year 4s to look at both discrete and continuous data and year 3s to look at bar graphs etc. and answer questions such as how much more. | **Angles –** Pupils know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. They can draw given angles, and measure them in degrees (o) pupils are able to identify: angles at a point and one whole turn (total 360o ) angles at a point on a straight line and 2 1 a turn (total 180o ) other multiples of 90o and use the properties of rectangles to deduce related facts and find missing lengths and angles. They can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.Co-ordinatesPupils can plot and read co-ordinates in all four quadrants. Year 6 pupils can use reasoning and problem solving to calculate missing co-ordinates of a given shape by reading and interpreting existing given co-ordinates. **Translation and Reflection of shapes**draw and translate simple shapes on the coordinate plane, and reflect them in the axes.**Ratio and Proportion** solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts |
| Summer 1 | **Number** – Using practical apparatus, number tracks and counting on/back to solve addition and subtraction number sentences.Understand the symbols of + - and =.Understanding the vocabulary related to addition and subtraction to know what they need to do to solve given word problems.**Shape, Space and Measure** -To name and identify 2D and 3D shapes in their environment.Being able to name and identify the properties of the shapes.Using money in their play. Children to know why money is important and why we use need it. They will learnt the different coin values.Understanding what weight, capacity and length is and what we use to measure these and why.Understanding and using the vocabulary related to the different types of measuring. | **Addition and subtraction****Year 1**Consolidation of addition and subtraction including number lines, bar model, word problems, number facts and missing numbers using a bar model**Year 2**Consolidation of addition and subtraction to find missing numbers and complex missing numbers, column method including regrouping, adding and subtracting multiples of 10**Time** Consolidation of time – o`clock, half past, quarter past and quarter to**Year 2** 5 minute intervals and word problems for time**SATs revision** – place value, shapes, measurements | **Statistics -** investigation into sugary drinks. Children to collect data on how many sugary snacks are eaten. Year 4s to look at both discrete and continuous data and year 3s to look at bar graphs etc. and answer questions such as how much more.**Money** –all tolooking at quantities of pounds and pence and converting between pounds and pence. Ordering amounts of money, using rounding to estimate money amounts and adding and subtracting money. **Time** –telling the time from an analogue clock, read and write (convert time – year 4) between analogue and digital between 12 hours and 24 hours. | **Revision – all arithmetic style questions as part of the daily warm-up****Long multiplication****Long Division****SATs****(Algebra to be covered with year 6 pupils as part of ‘morning maths with KM)** **2D and 3D Shapes**Pupils can recognise, describe and build simple 3-D shapes, including making nets and compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons |
| Summer 2 | **Number** – Counting in 2’s, 5’s and 10’s. Children to count in rote, understanding how much they are adding each time. Understanding and applying when to count in the different values independently.Sharing different amount using practical activities, knowing that each group has got to be fair, equal and the same. Children to share objects fairly, 1 at a time ad check the total of each group once finished.Halving objects and amounts. Understanding when halving objects/shapes and pictures, that both halves have got to be exactly the same. Then knowing that to halve an amount, they need to share into 2 groups to ensure both halves are exactly the same.Understanding doubling as ‘the same again’. Seeing doubling in everyday context e.g. double bed, double decker bus and knowing how to double amounts. | **Four Operations** – consolidation**Positions and directions**Whole turn, half turn, quarter turns, clockwise and anti-clockwise, compass directions**Statistics**Pictograms, tally charts and bar charts | **Property of Shapes -** **Mass & Capacity****Position and Direction** | **Application of skills taught to include:**Problem solving – using the bar model**Money problems.** The complexity of the questions differentiated to the needs of groups. For those year 6 who are secure with mastery problems this will link to exchange rates of currency to link with our topic work. **Time problems**- for year 6 pupils who are secure with mastery style problems, these will be linked to our South America topic. Pupils will be taught to calculate flight durations and time zones. (Catch-up maths Afl dependent for individuals/small groups)  |
| Year 3/4- Times tables test to be sat in June 2020- children will be doing extra times tables practice throughout the year and will be using speed tests online.  |