|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| B  | **EYFS-Nursery** | **EYFS-Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Counting** | Recite numbers past 5Say one number name for each item in order 1,2,3,4,5 | Verbally count beyond 20. Recognising the pattern of the counting system. Have a deep understanding of numbers 1-10 | Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.Count numbers to 100 in numerals; count in multiples of twos, fives and tens | Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. | Count from 0 in multiples of 4, 8, 50 and 100. Find 10 or 100 more or less than a given number. | Count in multiples of 6, 7, 9, 25 and 1000.Find 1000 more or less than a given number. Count backwards through zero to include negative numbers. | Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Count forwards and backwards with positive and negative whole numbers, including through zero. |  |
| **Representing number** | Show finger numbers up to 5.Links numerals and amounts Experiments with their own symbols and marks | Have a deep understanding of numbers 1-10 | Identify and represent numbers using objects and pictorial representations Read and write numbers to 100 in numerals Read and write numbers from 1 to 20 in numerals and words | Read and write numbers to at least 100 in numerals and in words Identify, represent and estimate numbers using different representations, including the number line | Identify, represent and estimate numbers using different representations. Read and write numbers up to 1000 in numerals and in words | Identify, represent and estimate numbers using different representations.Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. | Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.Read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit | Read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit |
| **Use and compare**  |  |  | given a number, identify one more and one less | recognise the place value of each digit in a two-digit number (tens, ones) compare and order numbers from 0 up to 100; use and = signs | recognise the place value of each digit in a three-digit number (hundreds, tens, ones) compare and order numbers up to 1000 | find 1000 more or less than a given number Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000 | (read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit | (read, write), order and compare numbers up to 10 000 000 and determine the value of each digit |
|  |  |  |  | use place value and number facts to solve problems | solve number problems and practical problems involving these ideas | round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers | interpret negative numbers in context round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above | round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero solve number and practical problems that involve all of the above |
| **Vocabulary** | Count, numbers, bigger, smaller, same, symbols, numerals | number, forwards, backwards, greater, less, count, match quantity to numeral, most, least, compare | greater than, less than, equal to, number, digit, tens, ones, one-digit, two-digit, forwards, backwards, number digit, represent, concrete, pictorial, abstract, compare | one-digit, two-digit, tens, ones, boundaries, bridge, number, value, digit, place, represent, concrete, pictorial, abstract, compare, estimate,  | multiples, three-digit, hundreds, tens, ones, boundaries, bridge, number, digit, value, place, worth, represent, concrete, pictorial, abstract, compare, order | multiples, four-digit, thousands, hundreds, tens, ones, number, digit, value, place, worth, represent, concrete, pictorial, abstract, round | multiples, five-digit, six-digit, hundred thousands, ten thousands, thousands, hundreds, tens, ones, number, digit, value, place, worth, represent, concrete, pictorial, abstract, round, order, compare | multiples, seven-digit, number, millions, hundred thousands, ten thousands, thousands, hundreds, tens, ones, digit, value, place, worth, represent, concrete, pictorial, abstract, order, compare |
|  |  |  |  |  |  |  |  |  |
| **Calculations + / -** | Knows that the last number reached when counting a small set of objects is the ‘total’Compares quantities using more than/fewer than | Given a number, identify one more and one less. Compare quantities up to 10 in different contexts recognising when one quantity is greater than the other. | Add and subtract one-digit and two-digit numbers to 20, including zero. | Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: TU+U, TU+T, TU+TU and U+U+U. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. | Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. | add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate | add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers. | perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations. |
| **Problems +/-** |  |  | Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9. | Solve problems with addition and subtraction, using concrete, pictorial and abstract representations.Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.  | solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | solve addition and subtraction twostep problems in contexts, deciding which operations and methods to use and why | solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. | solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why. |
| **Vocabulary** | **More, less, fewer, same, match, total** | **Addition**add, plus, and,altogether, more, make,total, how many moreto make, greater,**Subtraction**subtract, take away,minus, leave, less, leftover, how many areleft, how many aregone, fewer | **Addition**add, and, altogether, more,total, whole number,partition, is the sameas/equal to, part-partwhole, number bonds, howmany more to make?**Subtraction**subtract, take away, minus,leave, less, left over, howmany are left? How manyare gone? Find thedifference. | **Addition**plus, altogether, sum, total,increase, partition, inverse,greatest, smallest, exchange**\***,is the same as/ equal to, partpart whole, commutative**Subtraction**subtract, subtraction, minus,less, inverse, decrease,greatest, smallest, difference,fewer than, exchange**\***, part-part whole, commutative**\*Borrowing should not be used as a term because it implies that the borrowed number needs to go back. Instead, we use the term exchange** | **Addition**add, addition, plus, and,altogether, more, sum, total,increase, number line, counton, partition, inverse, howmany more to make? Howmany more is \_\_\_ than\_\_\_?column method, exchange**\*****Subtraction**subtract, subtraction, takeaway, less, how many areleft/left over? inverse,decrease, difference, fewerthan, more than, boundary,how much less is \_\_\_ than\_\_\_? written method,exchange**\*****\*Borrowing should not be used as a term because it implies that the borrowed number needs to go back. Instead, we use the term exchange** | **Addition**add, addition, plus, make,more, sum, total, increase,inverse, altogether, how manymore to make\_\_? How manymore is \_\_ than\_\_? partition,count on, exchange**\***, columnmethod**Subtraction**subtract, subtraction takeaway, minus, decrease, leave,how many are left/left over?More than, fewer than,difference, tens/hundredsboundary, how muchmore/less is \_\_\_?, inverse, column method, exchange**\*****\*Borrowing should not be used as a term because it implies that the borro****wed number needs to go back. Instead, we use the term exchange** | **Addition**add, addition, plus, make,more, sum, total, increase,partition, column boundary,exchange**\***, decimal**Subtraction**subtract, subtraction, takeaway, minus, difference,decrease, exchange**\***, decimal**\*Borrowing should not be used as a term because it implies that the borrowed number needs to go back. Instead, we use the term exchange** | **Addition**add, addition, sum, total,increase, inverse, altogether,compact column addition,column boundary, exchange**\*****Subtraction**subtract, subtraction, minus,decrease, leave, difference,column boundary, exchange**\*****\*Borrowing should not be used as a term because it implies that the borrowed number needs to go back. Instead, we use the term exchange** |
|  | **EYFS-Nursery** | **EYFS-Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Recall / USe (x/÷)** |  | Automatically recall number bonds to 5, and some to 10 including doubles facts. Explore and represent within numbers to 10, including odds evens and doubles |  | Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot | Recall and use multiplication and division facts for the 3, 4 and 8 multiplication table. | Recall multiplication and division facts for multiplication tables up to 12 × 12.use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers recognise and use factor pairs and commutativity in mental calculations | Recall multiplication and division facts for multiplication tables up to 12 × 12.Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.Know and use the vocabulary of prime numbers, prime factors and composite (non- prime) numbers.Establish whether a number up to 100 is prime and recall prime numbers up to 19.Recognise and use square numbers and cube numbers, and the notation for both. | Identify common factors, common multiples and prime numbersuse estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy |
| **Calculations (x/÷)** | Fast recognition of up to 3 objects without counting (subititising) | Subitise to 5 | Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs  | Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. | Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental methods.Progress to formal written methods calculations as above(two-digit numbers times one- digit numbers) | multiply two-digit and three-digit numbers by a one-digit number using formal written layout. | multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for twodigit numbers multiply and divide numbers mentally drawing upon known facts 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 multiply and divide whole numbers and those involving decimals by | multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context Perform mental calculations, including with mixed operations and large numbers |
| **Problems (x/÷)** |  | Automatically recall (without reference to rhymes) number bonds to 5 and some to 10, including doubles facts. | Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. | Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. | Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. | Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. | Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. | solve problems involving addition, subtraction, multiplication and division |
| **Combined**  |  |  |  |  |  |  | solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign | use their knowledge of the order of operations to carry out calculations involving the four operations |
| **Vocabulary** | Automatic recallSubitise | **Multiplication**doubles, groups, \_\_\_times , once, twice, lots of,groups of, repeated addition, **number bonds, patterns, pairs** | **Multiplication**multiply, multiplication, lots of,groups of, repeat, same size,times, odd/even, repeatedaddition**Division**Divide, division, share equally,equal groups, fairly, equal,halve, share, one each…twoeach…three each… etc | **Multiplication**Commutative, lots of, groups of,repeat, times, multiply,multiplied by, multiple of, array,row, column, double**Division**sharing, into groups, halve,share, one each… two each…three each etc. divided by,divided onto, left over, howmany groups? | **Multiplication**lots of groups, repeat, times,multiply, multiplied by, multipleof, double, part-part whole**Division**equal, halve, equal groups of,divided by, divided into, howmany groups? regrouping, partpart whole | **Multiplication**lots of, groups, repeat, times,multiply, steps of, multipliedby, multiple of, double, product,expanded short multiplication**Division**sharing, share equally, intogroups, equal, divided by,divided into, left over,remainder, how many groups,divisible by, how many \_ gointo \_? inverse, quotient,divider, short division,regrouping | **Multiplication**lots of, groups, times, multiply,multiplied by, multiple of,product, short multiplication,long multiplication**Division**sharing, share equally, intogroups, divided by, divided into,left over, remainder, how manygroups, factor, divisible by,divisibility, inverse, quotient | **Multiplication**lots of, groups of, repeat,times, multiply, multipliedby, multiple of, factor, primenumber, product, shortmultiplication, longmultiplication**Division**divided by, divided into, leftover, remainder, how manygroups, factor, divisible by,divisibility, inverse, divider,dividend, quotient, shortdivision, long division |
|  | **EYFS-Nursery** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Recognising fractions and Write** |  | Explore how quantities (up to 10) can be distributed evenly | Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. | Recognise, find, name and write fractions 1/3, 1/4 , 2/4 and 3/4 of a length, shape, set of objects or quantity. | Count up and down in count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators | Count up and down in hundredths.Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. | identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths 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, 2/5 + 4/5 = 6/5 = 1 1/5 ) |  |
| **Comparing fractions** |  |  |  | Recognise the equivalence of 2/4 and ½  | recognise and show, using diagrams, equivalent fractions with small denominators compare and order unit fractions, and fractions with the same denominators | Recognise and show, using diagrams, families of common equivalent fractions.  | Compare and order fractions whose denominators are all multiples of the same number.  | Use common factors to simplify fractions. Use common multiples to express fractions in the same denomination.Compare and order fractions, including fractions > 1. |
| **Fraction calculations** |  |  |  | Write simple fractions for example, 1/2 of 6 = 3  | Add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7 ]. | Add and subtract fractions with the same denominator. | Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. | 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. Divide proper fractions by whole numbers. |
| **Fractions****Solve Problems**  |  |  |  |  | solve problems that involve all of the above | solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number |  |  |
| **Decimals** **Recognise, write, Compare**  |  |  |  |  |  | Recognise and write decimal equivalents of any number of tenths or hundredths.Recognise and write decimal equivalents to ¼, ½ and ¾. round decimals with one decimal place to the nearest whole number compare numbers with the same number of decimal places up to two decimal places | read and write decimal numbers as fractions [for example, 0.71 = 7/100Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Round decimals with two decimal places to the nearest whole number and to one decimal place Read, write, order and compare numbers with up to three decimal places | identify the value of each digit in numbers given to three decimal places |
| **Fractions, Decimals and Percentages** |  |  |  |  |  | Solve simple measure and money problems involving fractions and decimals to two decimal places. | Recognise the per cent symbol (%) and understand that per cent relates to ‘number of parts per hundred’, and write percentages as a fraction with denominator 100, and as a decimal.Solve problems involving number up to three decimal places. Solve problems which require knowing percentage and decimal equivalents of ½ , ¼ , 1/5 , 2/5 , 4/5 and those fractions with a denominator of a multiple of 10 or 25 | Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8 ] Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts |
| **Vocabulary** |  | **Fractions**half, share equally, two groups | **Fractions**whole, equal parts, one half, two halves, a quarter, two quarters, four equal parts | **Fractions** whole, equal parts, three quarters, one third, equivalence, equivalent  | **Fractions**whole, equal parts, numerator, denominator, unit fraction, non-unit fraction, compare, order, tenths | **Fractions**whole, equal parts, numerator, denominator, unit fraction, non-unit fraction, equivalent decimals and fractions**Decimals and percentages**decimals, decimal number, tenths, hundredths, decimal point, whole number, fraction and decimals equivalence, equivalent  | **Fractions**whole, equal parts, numerator, denominator, integer, unit fraction, non-unit fraction, proper fractions, improper fractions, mixed numbers, simplify, half, quarter fifth, two fifths, four fifths**Decimals and percentages**decimals, decimal number, tenths, hundredths, thousandths, decimal point, fraction, decimal and percentage equivalence, equivalent, percentage, out of 100, \_\_\_ parts per hundred | **Fractions** whole, equal parts, numerator, denominator, integer, unit fraction, non-unit fraction, simplify, simplest form**Decimals and percentages**decimals, decimal number, tenths, hundredths, thousandths, decimal point, fraction, decimal and percentage equivalence, equivalent, percentage, out of 100, \_\_\_ parts per hundred |
|  | **EYFS-Nursery** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Ratio & Proportion** |  |  |  |  |  |  |  | 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 the calculation/use of percentages for comparison Solve problems involving similar shapes where the scale factor is known or can be found Solve problems involving unequal sharing and grouping using knowledge of fractions and multiple |
| **Vocabulary** |  |  |  |  |  |  |  | ratio, proportion, missing values, integer, comparison, relative sizes, scale, scale factor, relationship, linear pattern, describe |
| **Algebra** |  |  | solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = χ – 9 | recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems | solve problems, including missing number problems |  |  | Use simple formulae. Generate and describe linear number sequences.Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables. |
| **Vocabulary** |  |  |  |  |  |  |  | algebra, number, known, unknown, formula, equation, expression, sequence, variables, linear sequences, substitute, symbol  |
|  | **EYFS-Nursery** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Measures** | Make comparisons between objects relating to size, length, weight and caoacity | Has developed a range of mathematical language to describe and compare size, length and weight | Compare, describe and solve practical problems for: length/height, weight/mass, capacity/volume & time.Measure and begin to record length/height, weight/mass, capacity/volume & time (hours, minutes, seconds). | Choose and use appropriate standard units to estimate and measure length/height (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. Compare and order lengths, mass, volume/capacity and record the results using >, < and =.  | Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). | Convert between different units of measure.estimate, compare and calculate different measures | Convert between different units of metric measure. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. | Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. 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, using decimal notation to up to three decimal places. Convert between miles and kilometres. |
| **Money** |  |  | Recognise and know the value of different denominations of coins and notes.  | Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. Find different combinations of coins that equal the same amounts of money. Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. | Add and subtract amounts of money to give change, using both £ and p in practical contexts. | Estimate, compare and calculate different measures, including money in pounds and pence. | Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. |  |
| **Time** | Begin to describe a sequence of events |  | sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] Recognise and use language relating to dates, including days of the week, weeks, months and years Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times | Compare and sequence intervals of time.Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. Know the number of minutes in an hour and the number of hours in a day. | Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o’clock, a.m./p.m., morning, afternoon, noon and midnight.Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events, for example to calculate the time taken by particular events or tasks.  | read, write and convert time between analogue and digital 12-and 24-hour clocks Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days | Solve problems involving converting between units of time. | use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa |
| **Perimeter, Area, Volume**  |  |  |  |  | measure the perimeter of simple 2-D shapes | measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Find the area of rectilinear shapes by counting squares | measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres (cm2 ) and square metres (m2 ) and estimate the area of irregular shapes Estimate volume [for example, using blocks to build cuboids] and capacity [for example, using water] | Recognise that shapes with the same areas can have different perimeters and vice versa Recognise when it is possible to use 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 cubic centimetres (cm3 ) and cubic metres (m3 ), and extending to other units |
| **Vocabulary** | **Length and height:**tall, taller, tallest, small, smaller, smallest**Mass and weight:**heavy, heavier, heaviest, light, lighter, lightest**Capacity and volume:**full half full, empty **Time:**day, week, morning, | **Length and height:**tall, taller, tallest, small, smaller, smallest**Mass and weight:**heavy, heavier, heaviest, light, lighter, lightest**Capacity and volume:**full half full, empty **Time:**day, week, morning, afternoon, evening, night, bedtime, dinnertime, today, yesterday, tomorrow, before, after, next, last, now, soon, early, late, quick, quicker, quickest, slow, slower, slowest, old, older, oldest, new, newer, newest, hour, o'clock, clock, watch**Money:**coins, price, pay, total, cost | **Length and height:**long, short, longer, shorter, tall, short, double, half**Mass and weight:**heavy, light, heavier than, lighter than**Capacity and volume:**full, empty, greater than, less than, half full, quarter full**Time:**quicker, slower, earlier, later, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening**Money:**pounds, pence, amounts, value, change, notes, coins | **Length and height:**greater than, less than ,equal to, centimetres, metres, **Mass and weight:**grams, kilograms,**Capacity and volume:**millilitres, litres, **Time:**minutes, hours, days, compare, sequence,**Money:**pounds, pence, amounts, value, change, equivalent amounts | **Length and height:**metre, centimetre, millimetre, perimeter**Mass and weight:**kilogram, gram**Capacity and volume:**litre, millilitre, compare**Time:**a.m, p.m, morning, afternoon, noon, midnight, duration, seconds, minutes, hours, 12-hour, 24-hour, analogue, **Money:**pound, pence, total, cost, change | **Length and height:**estimate, compare, metre, centimetre, millimeter, rectilinear, perimeter, area**Mass and weight:**estimate, compare, kilogram, gram**Capacity and volume:**estimate, compare, litre, millilitre**Time:**analogue, digital, 12-hour, 24-hour, converting, seconds, minutes, hours, weeks, days**Money:**pound, pence, value, cost, change | **Length and height:**metre, centimetre, millimeter, squared, composite rectilinear, perimeter, area**Mass and weight:**estimate, compare, kilogram, gram**Capacity and volume:**estimate, compare, litre, millilitre**Time:**analogue, digital, 12-hour, 24-hour, converting, seconds, minutes, hours, weeks, days, timetable, **Money:**pound, pence, value, cost, change, decimal notation | **Length and height:**metre, centimetre, millimeter, squared, composite rectilinear, perimeter, area**Mass and weight:**estimate, compare, kilogram, gram**Capacity and volume:**cubic, estimate, compare, litre, millilitre**Time:**analogue, digital, 12-hour, 24-hour, converting, seconds, minutes, hours, weeks, days, timetable**Money:**pound, pence, value, cost, change, decimal notation |
|  | **Nursery-EYFS** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **2-d shape** | Talk about 2D and 3D using informal language e.g. sides corners, straight,flat roundSelect shape appropriately ; flat surfaces for building etcCombine shapes to make new ones | Has developed a range of mathematical language to describe shape | recognise and name common 2- D shapes [for example, rectangles (including squares), circles and triangles] | Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] Compare and sort common 2-D and 3-D shapes and everyday objects. | Draw 2-D shapes | Compare and classify geometric shapes, including quadrilaterals and triangles, based on properties and sizes. Identify lines of symmetry in 2-D shapes presented in different orientations.  | distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Use the properties of rectangles to deduce related facts and find missing lengths and angles | Draw 2-D shapes using given dimensions and angles. Compare and classify geometric shapes based on their properties and sizes.illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |
| **3-d shape** | Talk about 2D and 3D using informal language e.g. sides corners, straight,flat round | Has developed a range of vocabulary to describe shape | recognise and name common 3- D shapes [for example, cuboids (including cubes), pyramids and spheres] | recognise and name common 3- D shapes [for example, cuboids (including cubes), pyramids and spheres] compare and sort common 3-D shapes and everyday objects | Make 3-D shapes using modelling materials recognise 3-D shapes in different orientations and describe them. |  | Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. | Recognise, describe and build simple 3-D shapes, including making nets.  |
| **Angles and Lines**  |  |  |  |  | Recognise angles as a property of shape or a description of a turn. Identify right angles, recognise that two right angles make a halfturn, three make three quarters of a turn and four a complete turn. Identify whether angles are greater or less than right angle.identify horizontal and vertical lines and pairs of perpendicular and parallel lines | Identify acute and obtuse angles and compare and order angles up to two right angles by size.identify lines of symmetry in 2-D shapes presented in different orientations complete a simple symmetric figure with respect to a specific line of symmetry | Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (°).Identify angles at a point and one whole turn (total 360°); at a point on a straight line and ½ a turn (total 180°). Identify other multiples of 90° | Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.find unknown angles in any triangles, quadrilaterals, and regular polygons |
| **Vocabulary** | 2D, 3D, shape, triangle, circle, square, rectangleSide, corner,  | 2D, 3D, shape, triangle, circle, square, rectangle, cube, cuboid, cylinder, sphere, pattern, repeated pattern | 2D shape, 3D shape, group, sort, cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square, shape, flat, curved, straight, round, hollow, solid, corner, face, side, edge, make, build, draw | 2D shape, 3D shape, size, bigger, larger, smaller, symmetrical, line of symmetry, fold, match, mirror line, reflection, pattern, repeating pattern  | 2D shape, 3D shape, horizontal, vertical, perpendicular, parallel, lines, orientation, describe, angles, faces, corners, edges | quadrilateral, triangles, acute angle, right angle, obtuse angle, symmetrical, line of symmetry, face, vertices [corner] compare, order | regular, irregular, polygons, properties, face, vertices, edges, acute angle, right angle, obtuse angle, straight angle, reflex angle, degrees | vertically opposite angles, circumference, radius, diameter, net, classify, quadrilaterals |
|  | **EYFS-Nursery** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Position & Direction** | To understand position through words alone e.g. the bag is under the tableDescribe a familiar routeDiscuss routes and location using in front or behind | Has developed a range od mathematical language to describe position | Describe position, direction and movement, including whole, half, quarter and three-quarter turns. | Order and arrange combinations of mathematical objects in patterns and sequences. Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line. Distinguishing between rotation as a turn and in terms of right angles for quarter, half and ¾ turns. |  | Describe positions on a 2-D grid as coordinates in the first quadrant. Describe movements between positions as translations of a given unit to the left/right and up/down. Plot specified points and draw sides to complete a given polygon. | Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. | Describe positions on the full coordinate grid (all four quadrants).Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |
| **Vocabulary** | top, middle, bottom, below, under, in front, behind.  | top, middle, bottom, above, below, underneath, in front, behind, first, second, last | position, over, under, underneath, above, below, top, bottom, side, on, in, outside, inside, around, in front, behind, front, back, before, after, beside, next to, opposite, apart, between, middle, edge, centre, corner, direction, left, right, up, down | Rotation, clockwise, anit-clockwise, straight line, ninety degree turn, right angle |  | Greater/less than 90°, orientation, co-ordinates, translation, quadrant, x-axis, y-axis, perimeter, area | reflection, translation, rotate, quadrant, co-ordinates, x-axis, y-axis | Four quadrant, translate, rotate, reflect, co-ordinate plane, axes |
| **Statistics** **Presenting and Interpreting data** |  |  |  | Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. | Interpret and present data using bar charts, pictograms and tables. | Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. | Complete, read and interpret information in tables, including timetable. | interpret and construct pie charts and line graphs and use these to solve problems |
| **Solve Statistical Problems**  |  |  |  | Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data. | Solve one-step and two-step questions [for example, ‘How many more?’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables. | Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. | Solve comparison, sum and difference problems using information presented in a line graph. | calculate and interpret the mean as an average. |
| **Vocabulary** |  |  |  | count, tally, sort, vote, graph, block graph, pictogram, represent, group, set, list, table, label title, most popular, least popular, least common  | chart, bar chart, frequency table, Carroll diagram, Venn diagram, axis, axes, diagram  | continuous data, discrete data, line graph, time graph, comparison, sum, difference | interpret, table, two-way table, timetable, comparison, sum, difference, line graph  | interpret, construct, pie chart, line graph, mean [average] |