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| YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 |
| **Number – number and place value** | **Number – number and place value** | Number and place value | **Number – number and place value** |
| count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s | 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, 100 | count in multiples of:  6, 7, 9, 25 and 1000 |
| given a number, identify 1 more and 1 less |  | find 10 or 100 more or less than a given number | find 1,000 more or less than a given number |
| count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number |  |  | count backwards through 0 to include negative numbers |
|  | recognise the place value of each digit in a two-digit number (tens, ones) | recognise the place value of each digit in a 3-digit number (100s, 10s, 1s) | recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s |
|  | compare and order numbers from 0 up to 100; use <, > and = signs | compare and order numbers up to 1,000 | order and compare numbers beyond 1,000 |
| identify and represent numbers using objects and pictorial representations including the number line, | identify, represent and estimate numbers using different representations, including the number line | identify, represent and estimate numbers using different representations | identify, represent and estimate numbers using different representations |
|  | read and write numbers to at least 100 in numerals and in words | read and write numbers up to 1,000 in numerals and in words | read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value |
| use the language of:  equal to, more than, less than (fewer),  most, least  read and write numbers from 1 to 20 in:  numerals and words | use place value and number facts to solve problems. | solve number problems and practical problems involving these ideas | solve number and practical problems that involve all of the above and with increasingly large positive numbers |
|  |  |  | round any number to the nearest 10, 100 or 1,000 |
| ***Addition and subtraction Y1*** | **Number – addition and subtraction Y2** | ***Addition and Subtraction Y3*** | **Number – addition and subtraction Y4** |
| 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 objects and pictorial representations, including those involving numbers, quantities and measures  applying their increasing knowledge of mental and written methods | solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why |
| represent and use number bonds and related subtraction facts within 20  read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs | recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 | add and subtract numbers with up to 3 digits, using formal written methods of columnar  addition  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 one-digit and two-digit numbers to 20, including 0 | add and subtract numbers using concrete objects, pictorial representations, and mentally, including:  a two-digit number and ones  a two-digit number and tens  two two-digit numbers  adding three one-digit numbers | add and subtract numbers mentally, including:  a three-digit number and 1s  a three-digit number and 10s  a three-digit number and 100s |  |
|  | show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot | estimate the answer to a calculation and use inverse operations to check answers | estimate and use inverse operations to check answers to a calculation |
|  | recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. |  |  |
| Multiplication and division  Y1 | **Number – multiplication and division Y2** | Multiplication and Division  Y3 | **Number – multiplication and division Y4** |
|  | recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers | recall and use multiplication and division facts for the:  3x, 4x, 8x multiplication tables | recall multiplication and division facts for multiplication tables up to 12 × 12 |
|  | calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs | 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 and... | use place value, known and derived facts to multiply and divide mentally, including:  multiplying by 0 and 1;  dividing by 1;  multiplying together 3 numbers |
|  |  | ... progressing to formal written methods | multiply two-digit and three-digit numbers by a one-digit number using formal written layout |
|  | show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot |  | recognise and use factor pairs and commutativity in mental calculations |
| 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  division,  including positive integer scaling problems and correspondence problems in which n objects are connected to m objects | solve problems involving:  multiplying  adding,  including using the distributive law to multiply two-digit numbers by 1 digit,  integer scaling problems and harder correspondence problems such as n objects are connected to m objects |
| Fractions Y1 | **Number – fractions Y2** | Fractions Y3 | **Number – fractions Y4** |
| recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity  recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity | recognise, find, name and write fractions 1/3 ¼ 2/4 ¾ of a length, shape, set of objects or quantity | 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 | count up and down in hundredths;  recognise that hundredths arise when dividing an object by 100  and dividing tenths by 10 |
|  | write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of 2/4 and ½ | recognise, find and write fractions of a discrete set of objects:  unit fractions  non-unit fractions with small denominators | recognise and show, using diagrams, families of common equivalent fractions |
|  |  | recognise and use fractions as numbers:  unit fractions  non-unit fractions with small denominators |  |
|  |  | recognise and show, using diagrams, equivalent fractions with small denominators | recognise and write decimal equivalents of any number of tenths or hundreds |
|  |  | add and subtract fractions with the same denominator within one whole [for example, +  =  ] | add and subtract fractions with the same denominator |
|  |  | compare and order unit fractions, and fractions with the same denominators | recognise and write decimal equivalents to 1/4 , 1/2 , 3/4 |
| Year 1 - Fractions | Year 2 - Fractions | Year 3 - Fractions | Year 4 – Fractions |
|  |  | 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 |
|  |  |  | find the effect of dividing a one- or two-digit number by 10 and 100, |
|  |  |  | identifying the value of the digits in the answer as ones, tenths and hundredths |
|  |  |  | round decimals with 1 decimal place to the nearest whole number  compare numbers with the same number of decimal places up to 2 decimal places  solve simple measure and money problems involving fractions and decimals to 2 decimal places |
|  |  |  | compare numbers with the same number of decimal places up to 2 decimal places |
|  |  |  | solve simple measure and money problems involving fractions and decimals to 2 decimal places |
| ***Measurement Y1*** | **Measurement Y2** | **Measurement Y3** | **Measurement Y4** |  |
| **compare, describe and solve practical problems for:**  **lengths and heights:** long/short longer/shortertall/short double/half  **mass/weight** heavy/light  heavier thanlighter than  **capacity and volume**  full/empty, more than less than half  half full quarter  **time** quickerslower earlierlater | choose and use appropriate standard units to estimate and measure:  length/height in any direction (m/cm);  mass (kg/g);  temperature (°C);  capacity (litres/ml) to the nearest appropriate unit,  using rulers, scales, thermometers and measuring vessels | measure, compare, add and subtract:  lengths (m/cm/mm);  mass (kg/g);  volume/capacity (l/ml) | convert between different units of measure [for example:  kilometre to metre;  hour to minute |  |
| **measure and begin to record the following:**  lengths and heights  mass/weight  capacity and volume  time (hours, minutes, seconds) | compare and order lengths, mass, volume/capacity and record the results using >, < and = |  |  |  |
|  |  | 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 |  |
| 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 |  |  |  |
| Y1 - measurement | Y2 - Measurement | Y3 - Measurement | Y4 - Measurement |  |
|  | 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 |  |
| **sequence events in chronological order using language**:  before and after, next first  today, yesterday, tomorrow  morning, afternoon , evening  **recognise and use language relating to dates, including:**  days of the week weeks months years | compare and sequence intervals of time | tell and write the time from an analogue clock, including:  using Roman numerals from I to XII,  and 12-hour  24-hour clocks |  |  |
| **tell the time:**  to the hour  half past the hour | 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 | estimate and read time with increasing accuracy to the nearest minute; |  |  |
| 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. | know the number of seconds in a minute and the number of days in each month, year and leap year |  |  |
|  |  | record and compare time in terms of seconds, minutes and hours; use vocabulary such as o’clock, am/pm, morning, afternoon, noon and midnight | read, write and convert time between  analogue and digital  12- and  24-hour clocks |
|  |  | compare durations of events [for example, to calculate the time taken by particular events or tasks] | solve problems involving converting from  hours to minutes,  minutes to seconds,  years to months,  weeks to days |
| **Geometry**  **Y1** | **Geometry – properties of shapes Y2** | **Geometry and Properties of Shape Y3** | **Geometry – properties of shapes Y4** |
| recognise and name common 2-D and 3-D shapes, including:  2-D shapes  rectangles  squares  circles  triangles | identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line | identify horizontal and  vertical lines and  pairs of perpendicular and  parallel lines | 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 |
| recognise and name common 2-D and 3-D shapes, including:  3-D shapes  cuboids  cubes  pyramids  spheres | identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces | draw 2-D shapes |  |
|  | identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] | make 3-D shapes using modelling materials;  recognise 3-D shapes in different orientations and describe them | compare and classify geometric shapes, including:  quadrilaterals and  triangles,  based on their properties and sizes |
|  | compare and sort common 2-D and 3-D shapes and everyday objects. |  |  |
| **Geometry – position and direction Y1** | **Geometry – position and direction Y2** | **Geometry – position and direction Y3** | **Geometry – position and direction Y4** |
|  | order and arrange combinations of mathematical objects in patterns and sequences |  |  |
| describe position, direction and movement, including whole, half, quarter and three-quarter turns | use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise). | recognise angles as a property of shape or a description of a turn |  |
|  |  | identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn;  identify whether angles are greater than or less than a right angle | identify acute and obtuse angles and compare and order angles up to 2 right angles by size |
|  |  |  | 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 |
|  |  |  |  |
| **Statistics Y1** | **Statistics Y2** | **Statistics Y3** | **Statistics Y4** |
| Nothing here for y1 | 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 |
|  | ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity | 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 |
|  | ask and answer questions about totalling and comparing categorical data. |  |  |