|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 |
| Autumn 1 yr 5 | Collaborative problem solving. | Collaborative problem solving around RRR and Shark | Maths related to creative curriculum (SPACE) and assessments | Assessments and Bike-ability  | Place value and large numbers. | Place value and large numbers. | Decimal place value. | Decimal place value and converting measures |
| Autumn 1 yr 6 | Collaborative problem solving. | Collaborative problem solving around RRR and Shark | Maths related to creative curriculum (SPACE) and assesments | Assessments and Bike-ability  | Place value and large numbers. | Place value and large numbers. | Decimal place value. | Decimal place value and converting measures. |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 |
| **Autumn 2 yr 5** | **Number- addition and subtraction** Add and subtract numbers mentally with increasingly large numbers. Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve addition and subtraction multi-step problems in contexts deciding which operations and methods to use and why.  | **Number – multiplication and division** **Check children can: double and halve including halving 2 digit numbers with an odd number of tens.** Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers by 10, 100 and 1000.**First check children can:***Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context.* *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 multiplication tables up to 12 x 12.* *Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.* *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. (yr 4)****When these are secure then…***Recognise and use factor pairs and commutativity in mental calculations. 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 2 digit numbers. 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. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3) Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.  | **Fractions**Compare and order fractions whose denominators are multiples of the same number. Add and subtract fractions with the same denominator. Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. Read and write decimal numbers as fractions [ for example 0.71 = ] Recap decimals as necessary in varied contexts:Number: Decimals Read, write, order and compare numbers with up to three decimal places. Recognise 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. Solve problems involving number up to three decimal places. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Use all four operations to solve problems involving measure [ for example, length, mass, volume, money] using decimal notation, including scaling.  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 |
| **Autumn 2 yr 6** | * Solve problems involving addition, subtraction, multiplication and division.
* Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.
* Use estimation to check answers to calculations and determine in the
* context of a problem, an appropriate degree of accuracy.
* Perform mental calculations, including with mixed operations and large numbers.
* Multiply multi-digit number up to 4 digits by a 2 digit number using the formal written method of long multiplication.
* Divide numbers up to 4 digits by a 2 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 2 digit number using the formal written method of short division, interpreting remainders according to context.
* Use their knowledge of the order of operations to carry out calculations involving the four operations.
 | * Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. (yr 5)
* Establish whether a number up to 100 is prime and recall prime numbers up to 19 (Yr 5)
* Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
* Compare and order fractions, inc fractions > 1
* Generate and describe linear number sequences (with fractions)
* Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions.
* Multiply simple pairs of proper fractions, writing the answer in its simplest form[for example ¼ x ½ =1/8]
* Divide proper fractions by whole numbers [for example
* 1/3 ÷ 2 = 1/6]
* 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.
 |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 |
| Spring 1 yr 5 | 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 + = = 1 ]Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.  | **Number: Percentages** 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 which require knowing percentage and decimal equivalents of , , , , and those fractions with a denominator of a multiple of 10 or 25. | **Perimeter and Area** Measure and calculate the perimeter of composite rectilinear shapes in cm and m. Calculate and compare the area of rectangles (including squares), and including using standard units, cm2,m2 estimate the area of irregular shapes.  | **Geometry- Angles** Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (o) Identify: angles at a point and one whole turn (total 360o), angles at a point on a straight line and ½ a turn (total 180o) other multiples of 90o **Measures**Volume Estimate volume [for example using 1cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] Use all four operations to solve problems involving measure  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 |
| Spring 1 yr 6 | **Fractions**Multiply simple pairs of proper fractions, writing the answer in its simplest form[for example ¼ x ½ =1/8]Divide proper fractions by whole numbers [for example 1/3 ÷ 2 = 1/6]Associate a fraction with division and calculate decimal fraction equivalents [ forexample, 0.375] for a simple fraction [for example 3/8]**Percentage**Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison.  | **FDP**Recall and use equivalences between simple FDP including in different contexts. | **Check children are secure with Yr 5 objectives, then****Measures inc area, perimeter and vol and angles**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 (review) , mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp. Convert between miles and kilometres. 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 cm3, m3 and extending to other units (mm3, km3)  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spring 2 yr 5 | Time (objectives from previous years)Time Convert between different units of measure eg hour to minute. Read, write & convert time between analogue and digital 12 and 14 hour clocks. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days  | Time or problem solving and reasoning – investigation week. Use week for review and gap filling. | **Statistics** Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables including timetables.  | **Properties of shape**Identify 3D shapes, including cubes and other cuboids, from 2D representations. 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.  | **Position and direction**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.  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spring 2 yr 6 | **Number: Algebra** **(Algebra should appear throughout all other areas)**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.  | **Ratio**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 similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.  | **Geometry and Statistics** Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Interpret and construct pie charts and line graphs and use these to solve problems. Calculate the mean as an average.  | **Geometry****Properties of shape**Draw 2D shapes using given dimensions and angles. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.  | **Geometry position and direction**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.  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Summer 1 yr 5 | Mental and written methods | Numerals and coordinates | FDP | Shape and position and direction | Assessment |  |  |  |
| Summer 1 yr 6 | **Revision**Mental and Written methods | **Revision** Numerals and co-ordinates | **Revision**FDP | **Revision**Shape, geometry (position + direction) and measures | SATS WEEK | ART WEEK | SEX ED |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Summer 2 yr 5 | Number facts and applications | Number facts and applications | Measures – area + perimeter project | Projects | Summer fairSecure mental and written calculations applied to fair stall. | Summer FairSecure mental and written calculations applied to fair stall. | Summer FairSecure mental and written calculations applied to fair stall. |  |
| Summer 2 yr 6 | Further development of number and algebra | Further development of number and algebra | Projects + transition prep(time) | Projects + transition prep(time) | Summer fair Secure mental and written calculations applied to fair stall. | Summer fairSecure mental and written calculations applied to fair stall. | Summer fairSecure mental and written calculations applied to fair stall. |  |