Year 3 Long Term Plan Numeracy

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| **Year 3** | **Autumn** | **Spring** | **Summer** |
| **NUMBER** |  |  |  |
| Number and place value  | * **Count in multiplies of 4, 50 and 100, find 10 or 100 more of less than a given number.**
* **Recognise the place value of each digit in a 3 digit number (hundreds, tens, ones).**
* **Read and write numbers to at least 1000 in numerals.**
* **Compare and order numbers up to 1000.**
* **Identify, represent and estimate numbers using different representations including those related to measure, e.g. using place value cards to show 985 = 900+80+5.**
* **Solve number problems and practical problems involving place value and rounding**
 | * Count in multiplies of 4, 50 and 100, find 10 or 100 more of less than a given number.
* Recognise the place value of each digit in a 3 digit number (hundreds, tens, ones).
* Read and write numbers to at least 1000 in numerals and **in words.**
* Compare and order numbers up to 1000.
* Solve number problems and practical problems involving place value and rounding.
* Identify, represent and estimate numbers using different representations including those related to measure, **e.g. using place value cards to show 985 = 900+80+5.**
 | * Count in multiplies of 4, 50 and 100, find 10 or 100 more of less than a given number.
* Compare and order numbers up to 1000.
* Solve number problems and practical problems involving place value and rounding.
* **Apply partitioning related to place value using varied and increasingly complex problems.**
* Identify, represent and estimate numbers using different representations including those related to measure, **e.g. using place value cards to show 985 = 900+80+5.**
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| Addition and subtraction | * **Add numbers with up to 3 digits, using formal written methods of column addition.**
* **Subtract numbers with up to 3 digits, using formal written methods of column subtraction.**
* **Add and subtract mentally, a 3 digit number and ones, a 3 digit number and tens, a 3 digit number and hundreds, two digit numbers where the answer could exceed 100.**
 | * Add numbers with up to 3 digits, using formal written methods of column addition.
* Subtract numbers with up to 3 digits, using formal written methods of column subtraction.
* **Solve problems including missing number problems, using number facts, place value, and more complex addition and subtraction.**
* **Estimate the answer to a calculation and use inverse operations to check answers.**
 | * Add and subtract mentally, a 3 digit number and ones, a 3 digit number and tens, a 3 digit number and hundreds, two digit numbers where the answer could exceed 100.
* Add numbers with up to 3 digits, using formal written methods of column addition.
* Subtract numbers with up to 3 digits, using formal written methods of column subtraction.
* Estimate the answer to a calculation and use inverse operations to check answers.
* Solve problems including missing number problems, using number facts, place value, and more complex addition and subtraction.
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| Multiplication and division | * **Develop efficient mental methods , for example, using commutativity. Using multiplication and division facts to derive related facts, for example, using 3 × 2 = 6, 6 ÷ 3 = 2 and 2 = 6 ÷ 3) to derive related facts (for example, 30 × 2 = 60, 60 ÷ 3 = 20 and 20 = 60 ÷ 3)**
* **Write and calculate mathematical statements for multiplication and division using the tables that they know including 2 digit numbers times 1 digit numbers, using mental methods progressing to written.**
* **Solve problems, including missing number problems, involving multiplications and division**

**e.g. 90 = 3 x 🗌.*** **Recall and use multiplication and division facts for the 3 and 4 multiplication tables.**
 | * Recall and use multiplication facts for the 3, 4 and **8** multiplication tables.
* Write and calculate mathematical statements for multiplication and division using the tables that they know including 2 digit numbers times 1 digit numbers, using mental methods progressing to written.
* Solve problems, including missing number problems, involving multiplications and division e.g. 90 = 3 x 🗌.
 | * Recall and use multiplication facts for the 3, 4 and 8 multiplication tables.
* Write and calculate mathematical statements for multiplication and division using the tables that they know including 2 digit numbers times 1 digit numbers, using mental methods progressing to written.
* Solve problems including missing number problems, involving multiplication and division, **including integer scaling problems** (e.g. change a recipe for 2 people to make enough for 6 people) **and correspondence problems in which n objects are connected to m objects** (e.g. 3 hats and 4 coats, how many different outfits? Or share 6 cakes equally between 4 children).
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| Fractions | * **Recognise, find and write fractions of a discrete set of objects; unit fractions and non unit fractions with small denominators e.g. find 1/3 of 9 beads, then 2/3 of 9 beads.**
* **Understand the relation between unit fractions as operators (fractions of), and division by integers, e.g. to find 1/3 you divide by 3, to find 1/5 you divide by 5.**
* **Count up and down in tenths, recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1 digit numbers or quantities by 10 e.g. 3 cakes shared between 10 children gives 3/10 each.**
 | * Count up and down in tenths, recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1 digit numbers or quantities by 10.
* **Connect tenths to place value, decimal measures and to division by 10, e.g. 7/10 = 0.7.**
* Recognise, find and write fractions of a discrete set of objects; unit fractions and non unit fractions with small denominators, e.g. there are 8 marbles and 3 are red, what fraction are red?
* **Recognise and use fractions as numbers on the numberline: unit fractions and non unit fractions with small denominators**.
* **Recognise and show, using diagrams, equivalent fractions with small denominators.**
* **Compare and order unit fractions, and fractions with the same denominator, e.g. put in order 3/8, 1/8, 7/8, 5/8.**
* **Solve problems that involve fractions, e.g. Amy ate 1/4 of her 12 sweets and Ben ate half of his 8 sweets, who ate more?**
 | * Count up and down in tenths, recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1 digit numbers or quantities by 10.
* Connect tenths to place value, decimal measures **(not restricted to decimals between 0 and 1**) and to division by 10 e.g. 13/10 = 1.3.
* Recognise and use fractions as numbers on the numberline: unit fractions and non unit fractions with small denominators.
* Recognise, find and write fractions of a discrete set of objects: unit fractions and non unit fractions with small denominators, e.g. find 4/5 of 30.
* Understand the relation between unit fractions as operators (fractions of), and division by integers, e.g. to find 1/3 you divide by 3, to find 1/5 you divide by 5.
* Recognise and show, using diagrams, equivalent fractions with small denominators.
* Compare and order unit fractions, and fractions with a **different denominator, e.g. put in order 1/2, 1/4, 1/8, 1/6.**
* **Add and subtract fractions with the same denominator within one whole, e.g. if 1/3 of a cake is eaten then 2/3 remains, or 5/7 plus 1/7 = 6/7.**
* Solve problems that involve fractions, e.g. Ali, Ben and Cara have 24 fish. 2/3 of them belong to Ali, 1/4 to Ben and the rest belong to Cara. How many fish belong to Cara?
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| MEASUREMENT |  |  |  |
| Measurement | * **Measure, compare, add and subtract: Length (m, cm, mm). E.g. How much ribbon left when 36cm is cut from 1m? Which is longer 6 1/2 cm or 62 mm.**
* **Measure and draw lines to the nearest half cm. Know the approximate length of a book, a room, hand span.**
* **Add and subtract amounts of money to give change, using both £ and p in practical contexts e.g. I buy 2 packs of sweets for 75p each, how much changes will I get from £2?**
* **Tell and write the time from an analogue clock (draw hands on a clock face to show the time, making sure the hour hand is located correctly).**
* **Record and compare time in terms of hours, minutes, seconds and o'clock. Use vocabulary such as am/pm, morning, afternoon, noon and midnight.**
* **Compare the duration of events, for example to calculate the time taken by particular events of tasks.**
 | * **Know the number of seconds in a minute and the number of days in each month, year and leap year.**
* Measure, compare, add and subtract: **Mass** (kg/g). E.g. Find 3 vegetables that weigh between 100g and 300g. Read 250g on a scale labelled every 100g. Which is heavier, 1kg, 300g or 1 1/2 kg? Know the approximate mass of an apple, book, baby, man.
* Add and subtract amounts of money to give change using both £ and p in practical contexts. E.g. I have a £2 coin, two £1 coins, three 50p coins, a 20p and seven 5p coins, how much more do I need to make £10?
* Tell and write the time from an analogue clock, **including using Roman Numerals from i to xii, and 12 hour digital clocks.**
* **Estimate and read time with increasing accuracy to the nearest minute**, record and compare time in terms of seconds, minutes, hours, o'clock, use vocabulary such as am/pm, morning/afternoon, noon and midnight.
* Compare durations of events, for example to calculate the time taken by particular events or tasks.
 | * **Measure, compare, add and subtract: Volume/Capacity (l/ml). E.g. read 300ml on a scale labelled every 200ml. Order a set of containers by capacity, using a measuring jug and water to check. Know the approximate capacity of a jug, a cup, bucket etc.**
* **Measure the perimeter of simple 2D shapes, e.g. measure accurately the sides of a triangle in cm or mm in order to find the perimeter.**
* Add and subtract amounts of money to give change, using both £ and p in practical contexts. E.g. Ali is saving 80p each week to buy a toy costing £5, how many weeks will it take him?
* Tell and write the time from an analogue clock, including using Roman Numerals from i to xii, and 12 and **24** hour digital clocks.
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| GEOMETRY |  |  |  |
| Properties of shapes | * **Draw 2D shapes and make 3D shapes using modelling materials.**
* **Recognise 3D shapes in different orientations and describe them (e.g. number of faces, edges, vertices).**
* **Identify whether angles are less than or greater than a right angle.**
* **Identify right angles, recognise that two right angles make a half turn, three make a three quarter turn and four make a complete turn.**
 | * Draw 2D shapes and make 3D shapes using modelling materials, recognise 3D shapes in different orientations and describe them.
* **Recognise that angles are a property of shape or a description of turn.**
* Identify right angles, recognise that two right angles make a half turn, three make three quarters of a turn and four a complete turn.
* Identify whether angles are greater than or less than a right angle.
* **Describe the properties of shape using accurate language, including symmetrical/non symmetrical, length of lines, and acute and obtuse angles. E.g. sort triangles into those with an obtuse angle and those without.**
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* **Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.**
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| STATISTICS |  |  |  |
| Use and interpret data | * **Interpret and present data using bar charts, pictograms and tables (understanding and using simple scales e.g. 2,5,10 units per cm with increasing accuracy).**
* **Solve one step and two step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.**
* **Interpret data presented in many contexts**
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