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| Skill/Year group  **Springfield Junior School**  **Maths Basic Skills for Fluency** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Halving and doubling**  Use partitioning as a strategy for doubling and halving to ensure conceptual understanding. | Double any number to 20, and multiple of 10  Half all even numbers to 20 and multiple of 10 | Double any number up to 1000  Half even numbers to 1000  Half odd numbers to 20  Understand and apply x and ÷ by 4 using halving and doubling | Double any number to 1000  Half any number to 1000, including odd numbers.  Understand and apply x and ÷ by 4 and 8 using halving and doubling.  Make decisions about when to use mental or written strategy for x or ÷ by 2, 4, or 8 | Double any number  Make decisions about when to use mental or written strategy for x or ÷ by 2, 4, or 8  Consolidate use of doubling and halving in different contexts. |
| **Times tables**  Daily practice of times tables required. | Learn and confidently recall  2, 3, 4, 5, 8 and 10 times tables.  Know related division facts. | Learn and confidently recall all times tables to 12x12.  Know related division facts.  Use knowledge of times tables to multiply by 10, and multiples of 10. | Use knowledge of times tables to multiply by 10, 100 and 1000 and multiples of 10,100 and 1000.  Fluently relate times table facts to other number facts.  e.g. 7x2= 14, 7x20=140, 70x20=1400, 1400÷2=700 etc | Fluently apply knowledge of times tables to varied problems. |
| **Factors and multiples**  Use these terms when teaching multiplication and division to embed within the children’s vocabulary. | Understand the term ‘factor’ and multiple in relation to multiplication. | Identify factor pairs of any number to 100.  Know that a multiple if the result of multiplying 2 numbers together. | Identify factor pairs of numbers to 100.  Know and use the terms prime, square and cubed accurately.  Find common factors of two numbers to 100. |  |
| **Mental addition and subtraction**  Children must be taught which mental strategy is best to solve the different problems they may face. | Know 1 and 10 more or less than any number to 100  Mentally add and subtract using near doubles or rounding up to 100.  e.g. 39+39 = 40+40-2  39+27 =40+30-4  Mentally add or subtract using adjusting strategy up to 100.  e.g. 39+27 = 40+26  or 39-27= 40-28  Mentally add and subtract using number bonds.  e.g.40-9=31  31+9=40 | Know 10, 100 and 1000 more or less of any number  Mentally add and subtract using near doubles or rounding up to 1000.  e.g. 39+39 = 40+40-2  39+27 =40+30-4  Mentally add or subtract using adjusting strategy up to 1000.  e.g. 39+27 = 40+26  or 39-27= 40-28  Mentally add and subtract using number bonds.  e.g.40-9=31  31+9=40 | As previously, numbers to 10,000.  Use mental methods to make estimations of an answer, before calculating. | Consolidate and apply knowledge of mental addition and subtraction strategies.  Estimating before calculating to identify reasonableness of an answer. |
| **Rounding** | Round numbers to the nearest 10, or 100 | Round any number to the nearest 10, 100 and 1000.  Round decimal numbers to the nearest whole number. | Round any number to the nearest 10, 100, 1000, 10,000 or 100,000  Round decimal numbers to the nearest whole number or tenth. | Round any number to the nearest 10, 100, 1000, 10,000 or 100,000  Round decimal numbers to the nearest whole number, tenth or hundredth |
| **The four operations** | Estimate answers before calculating.  Decision making for best strategy-mental or written.  Have a written strategy for solving all four operations.  Addition: 3d+3d  Subtraction: 3d-3d  Multiplcation: 2dx1d  Division: 2d/1d  Use inverse operation to check answers. | Estimate answers before calculating.  Decision making for best strategy-mental or written.  Have a written strategy for solving all four operations.  Addition: 4d+4d  Subtraction: 4d-4d  Multiplication: up to 3dx1d (expanded method)  Division 3d/1d  Use inverse operation to check answers. | Estimate answers before calculating.  Decision making for best strategy – mental or written.  Have a written strategy for solving all four operations.  Addition : Column method  Subtraction: Column method  Multiplication: Compact written method (up to 4dx2d)  Division: Division bracket. Up to 4d/1d  Use inverse operation to check answers. | Estimate answers before calculating.  Decision making for best strategy.  Have a written strategy for solving all four operations.  Addition : Column method  Subtraction: Column method  Multiplication: Compact written method  Division: Division bracket.  Use inverse operation to check answers.  BIDMAS |
| **Multiplying by 10,100 and 1000** | Multiply any single digit by 10 or a multiple of 10 (to 90)  Divide any multiple of 10, to 100 by 10.  Know that x0 =0 | Multiply single and 2 digit numbers by 10,100 and 1000  Divide multiples of 10,100 and 1000 by 10, 100 and 1000. | Multiply and divide any number by 10,100 and 1000, including decimals.  Apply skill to converting units of measure. | Multiply and divide any number by 10,100 and 1000, including decimals.  Apply skill to converting units of measure. |
| **Number bonds** | Number bonds to 10 and 100.  All possibilities for numbers to 20. | Investigate different ways of making numbers using number bond knowledge.  Use knowledge of number bonds to 10 and 20 to solve problems to 1000.  e.g. 1000-900  997+3=1000 | Use knowledge of number bonds to solve more complex problems.  Use knowledge of number bonds to 10 and 20 to solve problems to 10000.  e.g. 1000-900  997+3=1000 | Use knowledge of number bonds to solve more complex problems. |
| **Fractions, decimals and percentages** | Know visually  ½, ¼, 1/3, 2/4. ¾ and 1/10s  Use a bar to represent these fractions. | Recognise and write unit and non-unit fractions of visual representations.  Equivalent fractions to ½s, 1/4s.  Know that 1/10 =0.1 | Calculate equivalent fractions with different denominators.  Know fraction, decimal and percentage equivalent of:  ¼, ½, ¾, any tenth, 1/5, 1/3, hundredths and thousandths  Add and subtract numbers with the same and different denominators. | Equivalent fractions, decimals and percentages.  Finding percentages of any given amount.  Multiply and divide fractions |
| **Time**  **Learn it facts across the school:**  **365 days in a year**  **12 months in a year**  **30/1 days in a month (except feb)**  **24 hours in a day**  **7 days in a week**  **60 minutes in an hour**  **60 seconds in a minute**  **Fortnight = two weeks**  **Annual - yearly** | Estimate and read the time using an analogue and digital representation to the nearest 5 minutes.  Use a number line to solve time problems | Convert between analogue and digital time.  Use a number line to solve time problems | Solve problems involving time. Read and interpret time problems. Use a number line to solve time problems. | Solve problems involving time. Read and interpret time problems. Use a number line to solve time problems. |
| **Geometry** | Name all 2d Shapes  Identify right angles  Know language parallel and perpendicular | Acute and obtuse angles  Know language parallel and perpendicular | Identify all 3 d shapes from drawn representation  Measure and draw angles using a protractor |  |
| **Units of Measure:**  **Learn its:**  **10mm=1cm**  **100cm=1m**  **1000m=1km**  **1000g=1kg**  **1000ml=1l** |  | Convert between units of measure. Use x by 10, 100 or 1000 to convert. | Convert between units of measure. Use x by 10, 100 or 1000 to convert. | Solve problems involving different units of measure requiring conversion between units. |