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| **Year 5 - Building and assessing the conceptual understanding and learning – Measures** | | | |
| Pupils should be taught to:   * convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) * understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints * 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 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] * solve problems involving converting between units of time * use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. | | **Non-statutory guidance:**  Pupils use their knowledge of place value and multiplication and division to convert between standard units.  Pupils calculate the perimeter of rectangles and related composite shapes, including using the relations of perimeter or area to find unknown lengths. Missing measures questions such as these can be expressed algebraically 4 + 2b = 20 for a rectangle of sides 2 cm and b cm and perimeter of 20cm.  They calculate the area from scale drawings using given measurements.  Pupils use all four operations in problems involving time and money, including conversions (e.g. days to weeks, leaving the answer as weeks and days).  **See NCETM “Teaching for Mastery” Year 5 book –measurement.**  https://www.ncetm.org.uk/public/files/23305632/Mastery\_Assessment\_Y5\_Low\_Res.pdf | |
| **Autumn** | **Spring** | | **Summer** |
| Use measures as a context for rounding and ordering numbers - see number and place value. | * convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre) * understand and use equivalences between metric units and common imperial units such as inches, pounds and pints * measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres * calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm”) and square metre (m”) and estimate the area of irregular shapes * estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water) * solve problems involving converting units of time * use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling | | Continue to use measures as a context for ongoing number and calculation practice. |

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|  | **Key questions:**   * In the context of problem solving, can I convert between * kilometres and metres? * Metres and centimetres? * Centimetres and Millimetres? * Kilograms and grams? * Millilitre and litres?   (by using and applying my understanding of multiplying and dividing by 10 and 100)   * Do I have knowledge of imperial units of measure? Can I find metric equivalents (e.g. inches, pounds, pints) * Can I measure and calculate perimeter of composite rectilinear shapes in centimetres and metres? (Linked to appropriate addition strategies) * Can I accurately use the correct unit of measure when calculating area e.g cm²/ metres² ? * Can I calculate the area of squares and rectangles, using the appropriate calculation strategies? * Can I compare the area of squares and rectangles, through accurate measuring and calculating? * Can I estimate the area of irregular shapes? * Can I accurately use the correct unit of measure, to calculate volume e.g. cm³ , m³ ? * Can I use my calculation skills to estimate the volume of cubes and cuboids? * Can I estimate capacity using my knowledge of standard units of measure? * Can I solve problems involving capacity? * Can I solve problems, converting between units of time e.g. Days to weeks, Hours and Minutes? * Can I confidently use all four operations to solve problems involving a range of measures (Including time and money) - links to appropriate calculation strategies and use of decimal notation? * Can I calculate and talk about real life measurements from scale drawings? |  |