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| **Year 6 - Building and assessing the conceptual understanding and learning – Measurement** | | | |
| Pupils should be taught to:  Pupils should be taught to:   * 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, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places * 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 cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3].   **See NCETM “Teaching for Mastery” Year 6 book – calculation, measures, statistics, algebra)**  <https://www.ncetm.org.uk/public/files/23305653/Mastery_Assessment_Y6_Low_Res.pdf> | | **Non-statutory guidance:**  They connect conversion (e.g. from kilometres to miles) to a graphical representation as preparation for understanding linear/proportional graphs.  They know approximate conversions and are able to tell if an answer is sensible.  Using the number line, pupils use, add and subtract positive and negative integers for measures such as temperature.  They relate the area of rectangles to parallelograms and triangles, e.g. by dissection, and calculate their areas, understanding and using the formulae to do this.  Pupils could be introduced to compound units for speed, such as miles per hour, and apply their knowledge in science or other subjects as appropriate. | |
| **Autumn** | **Spring** | | **Summer** |
| **Ensure, through mental and aural work, as well as work on calculation, that children are confident with all standard units and conversions, including metric and imperial, and solving time problems including with analogue as well as digital 12 and 24 hour clock. (LINK TO NUMBER AND PLACE VALUE AND CALCULATION)**  **In a range of contexts, including all measures (including time and money)**   * Solve problems involving using, reading, writing and converting between standard units, converting measurements of length, mass, volume and **time** from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places (LINK TO NUMBER AND PLACE VALUE AND CALCULATION) * Convert between miles and kilometres (LINK TO NUMBER AND PLACE VALUE AND CALCULATION) * recognise that shapes with the same areas can have different perimeters and vice versa (LINK TO CALCULATION) * recognise when it is possible to use formulae for area and volume of shapes (LINK TO CALCULATION) * calculate the area of parallelograms and triangles (LINK TO CALCULATION) * calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3] (LINK TO CALCULATION) | **Ensure, through mental and aural work, as well as work on calculation, that children are confident with all standard units and conversions, including metric and imperial, and solving time problems including with analogue as well as digital 12 and 24 hour clock.**  **In a range of contexts, including all measures (including time and money)**   * Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (LINK TO NUMBER AND PLACE VALUE CALCULATION) * Use , read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and visa versa, using decimal notation to up to three decimal places (LINK TO CALCULATION) * Convert between miles and kilometres (LINK TO NUMBER AND PLACE VALUE AND CALCULATION) * recognise when it is possible to use formulae for area and volume of shapes (LINK TO ALGEBRA AND CALCULATION) | | Revision  Continue to use, apply and embed learning on all measures within transition units. |

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| Key questions:   * Can I confidently work with all standard units of measure, and work out conversions between different ones, including metric and imperial? * Can I solve problems involving time, using analogue times as well as digital 12 and 24 hour times? * Can I calculate area and perimeter and recognise that shapes can have the same area but different perimeters and visa versa? * Can I use formulae to explain the area or volume of shapes? * Can I calculate the area of parallelograms and triangles? * Can I calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3]? | **Key questions:** |