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| **Year 4 - Building and assessing the conceptual understanding and learning – Measurement** |
| **End of Year Expectations:**Pupils should be taught to: * Convert between different units of measure (e.g. kilometre to metre; hour to minute)
* measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
* find the area of rectilinear shapes by counting squares
* estimate, compare and calculate different measures, including money in pounds and pence
* read, write and convert time between analogue and digital 12 and 24-hour clocks
* solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.

  | **Non-statutory guidance:**Pupils build on their understanding of place value and decimal notation to record metric measures, including money. They use multiplication to convert from larger to smaller units. Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit. They relate area to arrays and multiplication.  |
| **Autumn** | **Spring** | **Summer** |
| * explore the concepts of area and perimeter in meaningful contexts – e.g. fencing, tarmac, flooring etc.
* find area of rectilinear shapes by counting squares
* measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
* building upon learning about the twelve hour clock, develop understanding of telling the time and solving problems using the 24 hour clock
* read, write and convert time between analogue and digital 12 and 24-hour clock
* solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days
* focusing on length, use increasing understanding of decimal notation to convert between different units of measure (mm / cm / m)
 | * focusing on mass, convert between different units of measure (Kg/g)
* estimate, compare and calculate different measures (Kg/g)
* solve problems involving converting kg to g and g to kg

 **See NCETM “Teaching for Mastery” Year 4 book –measurement.**https://www.ncetm.org.uk/public/files/23305622/Mastery\_Assessment\_Y4\_Low\_Res.pdf | * focusing on capacity, convert between different units of measure (l / ml)
* estimate, compare and calculate different measures (L/ml)
* solve problems involving converting l to ml and ml to l
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| **Key questions:*** Can I show that I understand the concepts of area and perimeter?
* Can I find the area of a rectilinear shape by counting squares?
* Can I begin to use a similar formula for finding the area of a rectilinear shape - 2 (a+b)?
* Can I measure and calculate perimeter?
* Can I tell the time using a 24 hour clock?
* Can I solve problems involving time using analogue, 12 and 24 hour clocks?
* Can I convert between different units of time?
* Can I convert between different units of measure for length?
* Can I use my increasing understanding of decimals to record decimal measures?

  | **Key questions:*** Can I convert between different units of measure for mass?
* Can I estimate, compare and calculate different measures for mass?
* Can I use my increasing understanding of decimals to record decimal measures?
 | **Key questions:*** Can I convert between different units of measure for capacity?
* Can I estimate, compare and calculate different measures for capacity?
* Can I use my increasing understanding of decimals to record decimal measures?
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