

Misterton Primary and Nursery School – Maths: Measurement Progression Document

Key Areas	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Comparing and Estimating	<i>Know how to use basic comparisons eg: Bigger/smaller/taller/shorter</i> <i>Know what comes first in a sequence and what comes last</i>	Know how to compare, describe and solve practical problems for: * lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] * mass/weight [e.g. heavy/light, heavier than, lighter than] * capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] time [e.g. quicker, slower, earlier, later] Know how to sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	Know how to compare and order lengths, mass, volume/capacity and record the results using >, < and = Know how to compare and sequence intervals of time	<i>Know how to confidently order and compare mixed units of measurement</i> Know how to compare durations of events, for example to calculate the time taken by particular events or tasks Know how to estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Telling the Time)	Know how to estimate, compare and calculate different measures, including money in pounds and pence (also included in Measuring)	Know how to calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes (also included in measuring) Know how to estimate volume (e.g. using 1 cm³ blocks to build cubes and cuboids) and capacity (e.g. using water)	Know how to calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm³) and cubic metres (m³), and extending to other units such as mm³ and km³

Measuring and Calculating	<i>Know that things can be measured using everyday materials and nonstandard measures</i>	Know how to measure and begin to record the following: * lengths and heights * mass/weight * capacity and volume * time (hours, minutes, seconds) Know how to recognise and know the value of different denominations of coins and notes	Know how to choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels Know how to recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Know how to find different combinations of coins that equal the same amounts of money Know how to solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	Know how to measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Know how to measure the perimeter of simple 2-D shapes Know how to add and subtract amounts of money to give change, using both £ and p in practical contexts	Know how to estimate, compare and calculate different measures, including money in pounds and pence (appears also in Comparing) Know how to measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Know how to find the area of rectilinear shapes by counting squares	Know how to use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. Know how to measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Know how to calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes Know how to <i>recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³)</i> (copied from Multiplication and Division)	Know how to solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (appears also in Converting) Know how to recognise that shapes with the same areas can have different perimeters and vice versa Know how to calculate the area of parallelograms and triangles Know how to 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 [e.g. mm³ and km³]. Know how to recognise when it is possible to use formulae for area and volume of shapes
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Telling the Time	<i>Know key times within a day</i>	Know how to tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. Know how to recognise and use language relating to dates, including days of the week, weeks, months and years	Know how to tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. Know how to know the number of minutes in an hour and the number of hours in a day. (appears also in Converting)	Know how to tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks Know how to estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Comparing and Estimating)	Know how to read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting) Know how to recognise and use language relating to dates, including days of the week, weeks, months and years Know how to solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Converting)	Know how to solve problems involving converting between units of time	<i>Know how to apply and use knowledge of time in a range of contexts</i>
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Converting	<i>Know that there are days in a week, months in a year</i>	<i>Know that there are minutes in an hour, hours in a day, days in a week, months of the year.</i>	know the number of minutes in an hour and the number of hours in a day. (appears also in Telling the Time)	know the number of seconds in a minute and the number of days in each month, year and leap year	Know how to convert between different units of measure (e.g. kilometre to metre; hour to minute) Know how to read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting) Know how to solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Telling the Time)	Know how to convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Know how to solve problems involving converting between units of time Know how to understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	Know how to 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 Know how to solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (appears also in Measuring and Calculating) Know how to convert between miles and kilometres
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