

Subject Specific-Skills: Age-related expectations in maths – measurement

| Year | Comparing and estimating | Measuring and counting | Telling the time | Converting |
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| N | Begin to use basic language to describe size (big, small etc.) and through practical exploration begin to understand mass through sand and water play. | | | |
| R | <p>Begin to compare, describe and solve practical problems for:</p> <ul style="list-style-type: none"> * 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] <p>sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]</p> | Using nonstandard units of measurement to record length, height, weight and capacity (e.g. concrete materials) | <ul style="list-style-type: none"> • Begin to recognise and use language relating to dates, including days of the week, weeks, months and years | |
| 1 | <p>compare, describe and solve practical problems for:</p> <ul style="list-style-type: none"> * 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] * sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] | <p>Measure and begin to record the following:</p> <ul style="list-style-type: none"> • lengths and heights • mass/weight • capacity and volume • time (hours, minutes, seconds) • Recognise and know the value of different denominations of coins and notes | <ul style="list-style-type: none"> • Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. • Recognise and use language relating to dates, including days of the week, weeks, months and years | |
| 2 | <ul style="list-style-type: none"> • Compare and order lengths, | <ul style="list-style-type: none"> • Recognise and use symbols for | <ul style="list-style-type: none"> • Tell and write the time to five | <ul style="list-style-type: none"> • Know the number of minutes in |

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| | <p>mass, volume/capacity and record the results using >, < and =</p> <ul style="list-style-type: none"> Compare and sequence intervals of time | <p>pounds (£) and pence (p); combine amounts to make a particular value</p> <ul style="list-style-type: none"> Find different combinations of coins that equal the same amounts of money Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 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 | <p>minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.</p> <ul style="list-style-type: none"> Know the number of minutes in an hour and the number of hours in a day. (appears also in Converting) | <p>an hour and the number of hours in a day. (appears also in Telling the Time)</p> |
| 3 | <ul style="list-style-type: none"> Compare durations of events, for example to calculate the time taken by particular events or tasks 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) | <ul style="list-style-type: none"> Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Measure the perimeter of simple 2-D shapes Add and subtract amounts of money to give change, using both £ and p in practical contexts | <ul style="list-style-type: none"> Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. 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) | <ul style="list-style-type: none"> Know the number of seconds in a minute and the number of days in each month, year and leap year |
| 4 | <ul style="list-style-type: none"> Estimate, compare and calculate different measures, including money in pounds and pence (also included in Measuring) | <ul style="list-style-type: none"> Estimate, compare and calculate different measures, including money in pounds and pence (appears also in Comparing) Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Find the area of rectilinear shapes by counting squares | <ul style="list-style-type: none"> Read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting) Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Converting) | <ul style="list-style-type: none"> Convert between different units of measure (e.g. kilometre to metre; hour to minute) Read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting) Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days |

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| 5 | <ul style="list-style-type: none"> 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) Estimate volume (e.g. using 1 cm³ blocks to build cubes and cuboids) and capacity (e.g. using water) | <ul style="list-style-type: none"> Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. 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 (cm²) and square metres (m²) and estimate the area of irregular shapes <p><i>Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) (copied from Multiplication and Division)</i></p> | <ul style="list-style-type: none"> Solve problems involving converting between units of time | |
| 6 | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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 [e.g. mm³ and km³]. Recognise when it is possible to use formulae for area and volume of shapes | | <ul style="list-style-type: none"> 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 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) Convert between miles and kilometres. |