# CAPTAIN WEBB PRIMARY SCHOOL
# Maths Curriculum – Key Knowledge and Skills

(Bold-Statutory Statements from NC;
Italics-Non-statutory, but fundamental to ensure knowledge is secure)

| | | | Daycare 2/Rising 3 | Nursery Pre-School (3s) | Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **DECLARATIVE KNOWLEDGE:** | Facts and formulae(Fluency) Relationships between facts | | | **MEASURE** | | | | | | | |
| | | | | | | **Comparing & Estimating** | | | | | |
| | | | Knows what is meant by empty and full. | | Knows terms such as longer, shorter, heavier, lighter. | *Knows the correct measuring equipment for length, mass, and capacity.* | **Knows the standard units of measure for length, height, mass, temperature and capacity.** | | | | |
| **PROCEDUAL KNOWLEDGE** | Methods. Relationships between facts, procedures and missing facts. | | Knows how to compare size weight etc using gestures and language eg bigger/little/smaller, high/low, tall, heavy. | knows how to make comparisons between objects relating to size, length, weight and capacity. | **Knows how to tackle problems involving prediction and discussion, comparisons of length, weight or capacity, paying attention to fairness and accuracy.** | **Knows how to compare, describe and solve practical problems for lengths and heights, mass, capacity and volume and time.** | **Knows how to compare and order units of measure using < > =** | | | **Knows how to use and approximate equivalences between metric and imperial units such as inches, pounds and pints.** | |

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| **DECLARATIVE KNOWLEDGE:** Facts and formulae(Fluency) Relationships between facts | | | | | | | **MEASURE** | | | |
| | | | | | | | **Measuring & Calculating** | | | |
| | | | | | Knows the coins and notes by their value, size, and colour. | *Knows the value of coins and notes in order to compare amounts.* **Knows the symbols for £ and p.** | *Knows the correct notation and strategies for calculating with money.* **Knows the term perimeter.** | **Knows the area is the measurement of the surface of a rectilinear figure.** | Knows that angles are measured using a protractor. **Knows the three dimensions for finding the volume.** | **Knows that shapes with the same area can have different perimeters and vice versa.** |
| **PROCEDUAL KNOWLEDGE:** Methods . Relationships between facts, procedures and missing facts. | | | | | **Knows how to measure and begin to record length, mass, capacity, volume in non-standard units then standard units.** | **Knows how to combine amounts to make a particular value.** **Knows how to find different combinations of coins that equal the same amounts of** | **Knows how to measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)** **Knows how to measure the perimeter of simple 2-D** | **Knows how to estimate, compare and calculate different measures, including money in pounds and pence** **Knows how to calculate the** | **Knows how to calculate and compare areas of rectangles.** Knows how to use a protractor to draw angles and lines accurately. **Knows how to calculate the perimeter of** | **Knows how to calculate the area of parallelograms and triangles.** **Knows how and when to use formulae for area and volume of shapes.** |

| | | | | | | money using notes and coins. **Knows how to find change in the context of money.** | shapes. **Knows how to add/subtract amounts of money to give change using both £ and p in practical contexts.** **Knows how to measure accurately reading the marked divisions in the appropriate units.** | perimeter as the measurement of the boundary of a rectilinear figure. | rectangles and related composite shapes, including using the relations of perimeter or area to find unknown lengths. **Knows how to estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water].** **Knows how to use all four operations in problems involving time and money, including conversions.** | |
|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | *Knows how to solve missing measures questions such as these can be expressed algebraically.* *Knows how to calculate the area from scale drawings using given measurements.* | |
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| | | | | | **MEASURE** | | | | | |
| | | | | | **Telling the Time** | | | | | |
| **DECLARATIVE KNOWLEDGE:** | *Facts and formulae(Fluency)* *Relationships between facts* | Knows that things may happen now or at another time | Knows the language to sequence events real and fictional using first, then, after. Knows familiar patterns in daily routines. Knows what is happening next | Knows that time passes and recognises routines. Knows the date and month of their birthday. | **Knows and uses language relating to dates including days of the week and the months of the year.** **Knows the sequence of events in chronological order using language.** | **Knows the number of minutes in an hour and the number of hours in a day.** | **Knows passing of time can be calculated as time durations.** **Knows and uses vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight.** **Knows the time in 12hr and 24hr representations.** **Knows that analogue clocks can be represented in roman numerals.** | | | |

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| PROCEDUAL KNOWLEDGE: Methods. Relationships between facts, procedures and missing facts. | | | Knows when key times of the day are eg lunchtime, hometime | | **Knows how to tell the time to an hour and half past.**<br><br>**Knows how to draw the hands on a clock to show these times.** | **Knows how to read the time to the 5-minute intervals.**<br><br>**Knows how to read quarter past and quarter to on a clock face.**<br><br>**Knows how to draw the hands on a clock face to show quarter past and quarter to.**<br><br>**Knows how to compare and sequence intervals of time.** | **Knows how to read the time to the nearest minute.**<br><br>**Knows the number of seconds in a minute and the number of days in each month, year and leap year.** | **Knows how to read, write, and convert time between analogue and digital 12- and 24-hr clocks.**<br><br>**Knows how to solve problems involving converting hours to minutes, minutes to seconds, years to months, week to days.** | | |
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| | | | | | **MEASURE** | | | | | |
| | | | | | **Converting** | | | | | |
| **DECLARATIVE KNOWLEDGE:** Facts and formulae(Fluency) Relationships between facts | | | | Knows that money is used to buy items. | | | | **Knows that multiplication can be used to convert from larger to smaller units.** *Knows that perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit.* | **Knows the common imperial measurements in use and begin to convert to metric measures.** | **Knows that approximately 5 miles = 8 kilometres.** **Knows approximate conversions of imperial/metric units.** |
| **PROCEDUAL KNOWLEDGE:** Methods.Relationships between facts, procedures and missing facts. | | | | | | | | **Knows how to multiply and divide to convert between units of measure.** | **Knows how to use place value, multiplication, and division to convert between standard units.** | **Knows how to use, read , write and convert between standard units of length, mass and volume.** **Knows how to calculate, estimate and compare volume** |

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| | | | | | | | | | | of cubes and cuboids using the formula l x b x h |
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| | | | | | | | | | | |

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| **Vocabulary** | | First<br>Then<br>After before<br>Every day<br>Every evening<br>Morning<br>Afternoon<br>Evening<br>Night-time<br>Earlier<br>Later<br>Too late<br>Too soon<br>In a minute<br>Yesterday<br>Tomorrow<br>Longer<br>Shorter<br>Heavier<br>Lighter<br>More<br>less | More<br>less<br>**Heavier than**<br>**Lighter than**<br>**Shorter than**<br>**Longer than** | Long/short<br>Longer/shorter<br>Tell/short<br>Double/half<br>Heavy/light<br>Heavier thsn/lighter than<br>Full/empty<br>Half full<br>Quicker/slower<br>Earlier/later<br>Hour/minute/second<br>Before/after/next<br>First<br>Today/yesterday/tomorrow<br>Morning/afternoon/evening<br>Day/week/month/year<br>O'clock/half past | Millimetre<br>Centimetre<br>Kilogram<br>Gram<br>Litre<br>Millilitre<br>Greater than/less than<br>**Pound**<br>**Pence**<br>**Change**<br>**Quarter past**<br>**Quarter to**<br>**Half as high**<br>**Twice as wide**<br>**analogue** | **Perimeter**<br>**Roman numeral**<br>**24 hour clock**<br>**Digital clock**<br>**O'clock**<br>**Am**<br>**Pm**<br>Noon<br>Midnight<br>Month<br>Year<br>**Leap year** | **Metric**<br>**Convert**<br>area | Metric<br>**Imperial**<br>**Volume**<br>**Perimeter**<br>Area<br>**Scaling conversion** | Conversion<br>**Mile**<br>**Kilometre**<br>**Formulae**<br>**Cubic centimetre**<br>**Cubic metre dissection** |

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