**MATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 1 | STRAND: Measurement and Geometry | **SUB-STRAND: Length 1** | **WORKING MATHEMATICALLY:**  MA2-1WM & MA2-2WM |
| OUTCOMES: MA2-9MG | | **Measures, records, compares and estimates lengths, distances and perimeters in metres, centimetres and millimetres, and measures, compares and records temperatures.** | | |
| **CONTENT:** | | **Measure, order and compare objects using familiar metric units of length.**   * Measure lengths and distances using metres and centimetres * Record lengths and distances using metres and centimetres e.g. 1m 25cm * Compare and order lengths and distances using metres and centimetres | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | * Have students work in groups to build a tower (using blocks) that has to be a specific measurement tall e.g. 38cm or marking out lengths using metres. | | |
| WARM UP / DRILL | | * Students work in pairs to list, under the headings ‘centimetres’ and ‘metres’, as many items as they can think of that would be appropriately measured by either. | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | Using a range of objects estimate and measure their lengths in cm. What is this in mm? | | |
| QUALITY TEACHING ELEMENTS | | **INTELLECTUAL QUALITY** | **QUALITY LEARNING ENVIRONMENT** | **SIGNIFICANCE** |
| * Deep knowledge * Deep understanding * Problematic knowledge * Higher-order thinking * Metalanguage * Substantive communication | * Explicit quality criteria * Engagement * High expectations * Social support * Students’ self-regulation * Student direction | * Background knowledge * Cultural knowledge * Knowledge integration * Inclusivity * Connectedness * Narrative |
| RESOURCES | | Metre rule, trundle wheel, tape measure, 30cm ruler, mathematical terminology posters, pencils, paper, blocks, stop watches, markers | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| Define and emphasise appropriate terminology for the sub-strand e.g. long, high, tall, short, the same as, longer than, shortest, longest, taller than, metres, centimetres.  * Teach and review units of measurement; metres (m) and centimetres (cm). Demonstrate using measuring implements accurately including tape measure, 30cm ruler, metre rule, trundle wheel. * IWB Game – ordering lengths i.e. tallest to shortest, furthest distance to closest distance; then making comparisons. | LEARNING SEQUENCERemediationS1 or Early S2 | * Measure different areas of the school from same starting point using trundle wheels. Determine longest and shortest by comparing measurements. |
| LEARNING SEQUENCES2 | Investigations   * Use a tape measure to measure a variety of objects around the school environment to the nearest centimetre e.g. 1m 38cm. Have students order them from shortest to longest. * Students work in pairs to find three items in the classroom which have a total length of 25cm. Students record their findings by drawing the items, labelling with the measurements in centimetres; and showing how the three lengths were added to make a total of 25cm. * Students work in groups/pairs to design a dinner table which will seat four students along each side, with enough space to eat comfortably. Students draw a diagram of the table with the listed reasons for the dimensions.   Assessment   * Students work in groups to measure, record and compare body parts e.g. height, head size, wrist, arm length. Students record measurements to nearest centimetre. |
| LEARNING SEQUENCEExtensionLate S2 or Early S3 | * Students work in pairs to see how far they can run in 10 seconds. They will measure and record to 2 decimal places. |
| **EVALUATION & REFLECTION** | Student Engagement: Achievement Outcomes:  Resources: Follow Up: |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.