**MATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: 3 | WEEK: 5 | STRAND: Measurement & Geometry | **SUB-STRAND:** Length 2 | **WORKING MATHEMATICALLY:**  MA2-1WM, MA2-2WM & MA2-3WM |
| OUTCOMES: MA2.9MG | | **Measures, records, compares and estimates lengths, distances and perimeters in metres, centimetres and millimetres, and measures, compares and records temperatures.** | | |
| **CONTENT:** | | **Use scaled instruments to measure and compare lengths (ACMMG084)**  Use a tape measure, ruler and trundle wheel to measure lengths and distances  Select and use an appropriate device to measure lengths and distances (Problem Solving)  Explain why two students may obtain different measures for the same length (Communicating, Reasoning)  Select and use an appropriate unit to estimate, measure and compare lengths and distances  Recognise the features of a three-dimensional object associated with length that can be measured, eg length, height, width, perimeter | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | * Worksheet “Measuring and Drawing (cms)” <http://www.primaryresources.co.uk/maths/mathsE1.htm> * Students revise measuring cms using a ruler. | | |
| WARM UP / DRILL | | * Basic conversions between mm, cm and m | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | If Emily is 105cm tall and Penny is 125cm tall, what is the difference in their heights? | | |
| 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 | | IWB for powerpoint viewing, trundle wheel, metre rulers, 30cm rulers, Dental floss, packet of foil, envelopes, A4 paper, scissors, glue sticks, dice, counters, centicubes, photocopied resources for Maths Tracks activities. | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| Whole class guided activities will involve the following:   * Activity 1   • find items that are measured in centimetres or millimetres  • convert millimetres to centimetres   * Activity 2   • mark a six-metre line with half-metre labels  • complete a range of tasks and record the distances involved   * Maths Language   Metres, centimetres, millimetres, objects, lengths, measure, estimate, decimal, lines, objects, problem | LEARNING SEQUENCERemediationS1 or Early S2 | * Measure a range of objects in cm only. Use ruler and tape measure. |
| LEARNING SEQUENCES2 | * Powerpoint “Choose the Correct Unit (Distance)” by Paula Alty (<http://www.primaryresources.co.uk/maths/mathsE1.htm>)   View as a class and discuss reasons for using each type of measuring device.   * Using Maths Tracks   One of a series of teaching units to accompany the Rigby/Harcourt series 'Maths Tracks'. Student activities include using the abbreviation for millimetre; converting between metres and centimetres and centimetres and millimetres; recording lengths or distances using decimal notation to one decimal place; using a tape measure, ruler or trundle wheel to measure lengths or distances.  <http://lrr.dlr.det.nsw.edu.au/LRRDownloads/7917/1/44285_2A_u58_Print.pdf> |
| LEARNING SEQUENCEExtensionLate S2 or Early S3 | * Walkabout Game   <http://www.tesaustralia.com/teaching-resource/Ruler-Measurement-Game-Walkabout-6264895/> |
| **EVALUATION & REFLECTION** | Student engagement: Achievement of 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.