**MATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 7 | 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)**   * Convert between metres and centimetres, and between centimetres and millimetres * Describe one centimetre as one-hundredth of a metre and one millimetre as one tenth of a centimetre (Communicating) * Explain the relationship between the size of a unit and the number of units needed, eg more centimetres than metres will be needed to measure the same length (Communicating, Reasoning) * Record lengths and distances using decimal notation to two places, eg 1.25 m | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | * Worksheet “Convert between mm, cm and m” * <http://www.tesaustralia.com/teaching-resource/mm-cm-and-m-Length-Conversion-Worksheet-6145134/> | | |
| WARM UP / DRILL | | * Straw Javelin * In pairs, students throw a straw for distance. The distance is measured in metres and centimetres. * Students complete a table, first estimating then measuring the distance. | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | A ribbon measures 55cm. If it is cut in half, how long will each piece now be, 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 | | 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 | |
| Complete whole class guided activities that involve the following:   * Using decimal notation to show the answers to a problem * Changing metres to centimetres and centimetres to millimetres * Measuring lengths in metres, centimetres and millimetres * Activity 3   • estimate and measure lengths of paper, insects and other objects in centimetres and millimetres   * Activity 4   • estimate and measure several objects in centimetres and millimetres  • compare lengths of objects using millimetres, centimetres and metres   * Activity 5   • solve a problem involving length   * Maths Language   Metres, centimetres, millimetres, objects, lengths, measure, estimate, decimal, lines, objects, problem | LEARNING SEQUENCERemediationS1 or Early S2 | * Revision of how to convert between mm and cm. Complete simple activities with these types of questions. |
| LEARNING SEQUENCES2 | * Investigation- 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.   * Activities   • measure given lines in centimetres and millimetres  • find objects with given lengths  • match measurements in column A with equal measurements in column B  <http://lrr.dlr.det.nsw.edu.au/LRRDownloads/7917/1/44285_2A_u58_Print.pdf>   * Assessment- move forwards or backwards along a metre length in millimetres or centimetres in the game ‘Roll and move a length’ |
| LEARNING SEQUENCEExtensionLate S2 or Early S3 | * Move forwards or backwards along a metre length in millimetres or centimetres in the game ‘Roll and move a length’. When you land on the number say the amount in cm and in cm,mm. |
| **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.