**MATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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**

|  |  |
| --- | --- |
| 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 SEQUENCEExtension Late 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.