**MATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: | STRAND: Measurement and Geometry | **SUB-STRAND:** Area 1 | **WORKING MATHEMATICALLY:**  MA2-1WM; MA2-2WM |
| OUTCOMES: MA2-10MG | | Measures, records, compares and estimates areas using square centimetres and square metres | | |
| **CONTENT:** | | **Recognise and use formal units to measure and estimate the areas of [rectangles](http://syllabus.bos.nsw.edu.au/glossary/mat/rectangle/?ajax" \t "_blank" \o "Click for more information about 'rectangles')**  - use efficient strategies for counting large numbers of square centimetres, eg using strips of 10 or squares of 100 (Problem Solving)  - record area in square centimetres using words and the abbreviation for square centimetres (cm2), eg 55 square centimetres, 55 cm2  - estimate the areas of rectangles (including squares) in square centimetres  - discuss strategies used to estimate area in square centimetres, eg visualising repeated units (Communicating, Problem Solving) | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | |  | | |
| WARM UP / DRILL | | * Counting by 10s * Covering items with tessellation blocks * \* Students model numbers using arrays of rows and columns to visually model multiplication facts e.g. 3 rows of 6 = 18. | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | * How many 10 cm 2 pavers would John need to pave his courtyard which is 5m X 3m? | | |
| 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 | |  | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| * Use the outline of the body to find the area e.g. How many   notebooks or paper plates can fit inside the body outline?   * Pose question of using a different sized plate. How will the answer change? * Explain the need for a standardised unit. Reveal square cm. How many square cms would we need? * Easier way – array using grid paper. | LEARNING SEQUENCERemediationS1 or Early S2 | * Teacher Directed:   \* Number squares on 10 X 10 grid.  \* Using overhead transparency, count area. Form arrays. Estimate, then count. |
| LEARNING SEQUENCES2 | * Trace around feet and hands and find the area using grid paper. * Encourage estimation before precise measuring. * Using overhead template, count or calculate the area of rectangular items around the room.   Investigation:   * Find other items with a similar area. Compare. |
| LEARNING SEQUENCEExtensionLate S2 or Early S3 | * Use formula of arrays to find area of items. Test/confirm with overlay and counting. * Present information in table form. |
| **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.
* Assessment rubrics or marking scale should be considered.