**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.
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| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | * How many 10 cm 2 pavers would John need to pave his courtyard which is 5m X 3m?
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| 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**

|  |  |
| --- | --- |
| 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.
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| LEARNING SEQUENCEExtension Late S2 or Early S3 | * Use formula of arrays to find area of items. Test/confirm with overlay and counting.
* Present information in table form.
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| **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.