**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 ; MA2-3WM |
| 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')**  \* recognise the need for a formal unit larger than the square centimetre to measure area  \* construct a square metre and use it to measure the areas of large rectangles (including squares), eg the classroom floor or door  \* explain where square metres are used for measuring in everyday situations, eg floor coverings (Communicating, Problem Solving)  \* recognise areas that are 'less than a square metre', 'about the same as a square metre' and 'greater than a square metre' (Reasoning) | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | |  | | |
| WARM UP / DRILL | | * Review arrays * Cover a playing card with an array. How many units are used? * Review 10cm2 overlay | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | |  | | |
| 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 | |
| \* Using a taped metre rectangle on the floor, ask the children to cover using a cm2.overlay.  How long will it take?  \* Pose question: What if we use a bigger unit?  \* Introduce a model m2 . Question is it bigger, greater than, less than ?  \* Working in groups chn construct a m2 using newspaper and tape.  \* Demonstrate measuring using the m2 eg. Table top | LEARNING SEQUENCERemediationS1 or Early S2 |  |
| LEARNING SEQUENCES2 | * Investigation:   Working in groups, chn measure item using the m2 . Chn record answers in a table form, using the unit XX newspaper squares.  \* Explain that the newspaper square is a m X m, therefore it is called a square metre and is recorded as m2  \* Students change recordings to new unit.  \* Sales catalogue search to demonstrate that some things are sold in square m. List responses. |
| LEARNING SEQUENCEExtensionLate S2 or Early S3 |  |
| **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.