**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; MA2-2WN; 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 that an area of one square metre need not be a square, eg cut a 1 m by 1 m square in half and join the shorter ends of each part together to create an area of one square metre that is rectangular (two metres by half a metre) (Problem Solving, Reasoning)  \* record areas in square metres using words and the abbreviation for square metres (m2), eg 6 square metres, 6 m2  \* estimate the areas of rectangles (including squares) in square metres  \* discuss strategies used to estimate area in square metres, eg visualising repeated units (Communicating, Problem Solving) | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | |  | | |
| WARM UP / DRILL | | **Conservation of Area review:**   * IWB tangram. * Magic square where a square is cut into jigsaw pieces and reformed. | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | Kim wants new carpet for her dining room. Her dining room is a 5m by 10m rectangle. How much carpet does she need to buy to cover her entire dining room? | | |
| 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 | |
| * Look at floor plans of houses. Discuss the shape of rooms. * Demonstrate using one of the newspaper square metres how the shape can be cut to represent a L shape. Discuss the conservation property. * Using craft squares, chn form tangram diagrams to understand that each square can make a different shape. Explicitly note with each that there is no change in the surface. | LEARNING SEQUENCERemediationS1 or Early S2 |  |
| LEARNING SEQUENCES2 | * **Estimation**   Students estimate, and then use square metre templates, to measure and record a variety of floor areas.  Possible questions include:  . How can you measure an area that is not quite a square metre?  . Did you have any problems with overlapping?  . What did you do about it?  Investigation: |
| 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.