**MATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

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

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