**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 7 | STRAND:MEASUREMENT AND GEOMETRY | **SUB-STRAND:**  **AREA 2** | **WORKING MATHEMATICALLY:**  **MA1-1WM MA1-3WM**   * MA1-3WM |
| **OUTCOMES:** **MA1-10MG** | | Measures, records, compares and estimates areas using uniform informal units | | |
| **CONTENT:** | | **Compare and order several shapes and objects based on area using appropriate uniform informal units**   * Compare and order the areas of two or more surfaces that cannot be moved, or superimposed, by measuring in uniform informal units * Predict the larger of two or more areas and check by measuring * Record comparisons of area informally using drawings, [numerals](http://syllabus.bos.nsw.edu.au/glossary/mat/numeral/?ajax" \t "_blank" \o "Click for more information about 'numerals') and words, and by referring to the uniform informal unit used | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | * Show the children a number of 2D shapes. In small groups, have them talk about they could order the shapes in order of the smallest area to the largest area. Come back to the group and discuss their findings. | | |
| WARM UP / DRILL | | * Flash cards of environmental pictures, e.g. house, brick, postage stamp etc. Children discuss appropriate uniform informal units that could be used to measure the area of these particular shapes, e,g, blocks, bricks, cards etc. | | |
| 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 | | 2D shapes on flash cards,  Variety of objects, shapes, and blocks etc. to measure area.  Ipads (at least 2) | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| * **Using Direct Comparison and Superimposing**   Students take turns to compare the area of two objects.  Revise the term **Superimpose**.  Have students put one object on top of the other to determine if they were correct.   * Move away from putting one   object n top of the other (superimposing) and move onto comparing by measuring.   * Place 2 items on the board and discuss possible ways of measuring area to determine which one has the larger or smaller area. * Children draw/write their findings on a piece of paper. E.g. shape A has a larger area than shape B. Shape A is 15 blocks and shape B is only 8 blocks. | LEARNING SEQUENCERemediationES1 | * **Measuring using concrete materials.**   Students select an object, shape or tile to compare the area of different shapes and work with the teacher.  The children measure the area of objects set out on tables. They first estimate and record their results on a stencil and then check and measure with teacher assistance.  Discuss if they were close with their estimations.  Children can either draw or write in sentences their results on paper. |
| LEARNING SEQUENCES1 | * **Measuring using concrete materials.**   Students select an object, shape or tile to compare the area of different shapes.  In small groups, students move around room measuring the area of a variety of objects set out on tables. They estimate, check and record their results on a stencil by either drawing or writing in sentences.  Questions that can be asked:  How will you work out the area of this tea towel?  What are you using to measure the area of this book?  Where will you record your answer?  What object on this desk has the smallest/ largest area?  Can you order the objects from the smallest to the largest area?  What is your estimate?  Were you correct?  How many squares do you think it will take to cover that stamp? |
| LEARNING SEQUENCEExtensionEarly S2 | * **Measuring using concrete materials.**   Students select an object, shape or tile to compare the area of different shapes.  In small groups, students move around room measuring the area of a variety of objects set out on tables. They estimate, check and record their results on a stencil by either drawing or writing in sentences.  This group of children may be able to use an IPad and take photos of their object and type a sentence to describe its area.  These photos can be viewed up on the IWB for the whole class to see and discuss or printed and displayed in the room. |
| **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.