**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: **1** | STRAND: Measurement and Geometry | **SUB-STRAND:** Area | **WORKING MATHEMATICALLY:** MAe-1WM & Mae-3WM |
| OUTCOMES: MAe - 10MG | Describes and compares areas using everyday language |
| **CONTENT:**  | **Use direct comparison to decide which shape has a larger area and explain their reasoning using everyday language*** identify the attribute of 'area' as the measure of the amount of surface
* cover surfaces completely with smaller shapes
* make closed shapes and describe the area of each shape
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * **Pre-assessment:** Give each student a sheet with 2 rectangles, measuring 6cm x 8cm and 4cm x 10cm. Instruct students to colour the shape with the bigger area.
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| WARM UP / DRILL | * Counting – numbers 1 – 20 – interactive
* Revising 2D shapes – especially quadrilaterals.
* http://www.topmarks.co.uk - 2D Shape Sort - Tessellations
 |
| 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 | Paper 2D quadrilaterals in various sizes, paper, scissors, pencils, copied handprint, paint, crayons, different enlargements of shapes, different-shaped or different-sized tiles, envelopes, lids, leaves, tiles, newspapers, drink coasters. **Covering a Giant** – large sheet of paper. |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Explicitly Teach:* What is area?
* Discuss the term “surface” and what a surface?
* Identifying the attribute of area as the measure of the amount of surface
* Demonstrate and explore using a variety of tactile shapes and surfaces around the classroom e.g. desk top, book covers.
* **IWB:**

Using the smartboard make some shapes that can be overlaid and demonstrate whether one has a larger area than the other by dragging. Create a series of shapes | LEARNING SEQUENCEPre Foundation Skills | * **Match the Shape**

Students are given four small pieces of paper, card or fabric. Two pieces are the same size and shape, and two are the same shape but different sizes.Possible questions include:. can you find two shapes that are the same?. how do you know they are the same?. can you describe how they are the same?*Extension:* The activity could be repeated for a wider range of shapes in smaller gradations of size. |
| LEARNING SEQUENCEES1 | * **Cover Up**

Students cover a shape with various tessellating and non-tessellating objects such as thin books, pieces of paper, sheets of newspaper, leaves or chip packets.Possible questions include:. is the entire shape covered?. what other objects could you use so that the entire shape is covered?* Investigation: **Covering a Paper Giant**

The teacher draws a ‘giant’ on a large sheet of butchers’ paper. In small groups, students are asked to cover a part of the giant (eg the pants) with small pieces of paper without leaving gaps. Students discuss whether the entire giant is covered. |
| LEARNING SEQUENCEExtension S1 | * Cover and Count

Students select one type of object to cover a given shape or area eg envelopes, lids, leaves, tiles, sheets of newspaper. They estimate, then count, the number of objects used.Possible questions include:. Why are some objects better than others for covering?. What can we do about the gaps?. What can we do with the part left over? |
| **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.