**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 2 | STRAND:MEASUREMENT & GEOMETRY | **SUB-STRAND:**  AREA | **WORKING MATHEMATICALLY:**  MAe-1WM & MAe-3WM |
| OUTCOMES: | | **MAe-10MG: Describes and compares areas using everyday language** | | |
| **CONTENT:** | | U**se direct comparison to decide which shape has a larger area and explain their reasoning using everyday language.**   * Use computer software to draw a closed shape, colouring in the area * Use everyday language to describe area, eg surface, inside, outside | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | * Class discussion: Have various shapes in the middle of the floor. Ask students to identify shapes names. Students can then each hold a shape. They are then asked to feel the shapes surface and point to it. Discuss “how big” the surface is and “what it feels like”. | | |
| WARM UP / DRILL | | IWB - Shape flashcards Notebook. | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | “Spot on”:Child 1 rolls the dice and places that amount of “spots” on his/her card.All other children then have their first turn and place the relevant number of spots on their board.Before children roll the dice for a second time they must identify “how many more” spots are needed to fill their board.(See the example below: I rolled 6 and need 4 more to be “spot on”).You can only win the game by throwing the exact number needed to fill your board. This may mean throwing the dice and placing no “spots” on the board. If I rolled a 5 below I would place no counters on my board. I need exactly 4 to be “spot on”When you call get the exact number need then you fill the board and shout “spot on!” | | |
| 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 | | Shape Flash cards, Various A4 size cardboard 2D shapes (x20), Wooden 2D pattern shapes etc (various shapes resources from classroom or maths storeroom), Classroom environment and Playground environment, Corrugated cardboard, Tux Paint computer program, Computers, Class set pieces of ribbon approx. 20 cm long, TENS frames x class set, Counters, Dice x 5 | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| Teacher models hunting around the rooms for shapes, discussing their surface area size along the way.  * Teacher to model on IWB Tux Paint program and the drawing tools students need to use. Model drawing a closed square and an open square. * Teacher models on the floor creating an open circle with ribbon and a closed circle. | LEARNING SEQUENCEPre Foundation Skills Pre- Kindergarten | **Shape hunt:**   * Students are asked to go on a “shape hunt” around the room. Students will explore the room naming shapes they see in their classroom environment. |
| LEARNING SEQUENCEES1 | **Surfaces lesson:**   * Students will gain an understanding of ‘surface’ by: touching and describing various surfaces in the classroom or school environment. Explore the classroom and playground further by allowing students to touch desk tops, tree trunks, skin, bricks, grass, fences and carpet and making rubbings, discussing floor, wall and roof coverings in different parts of the school and at home.   **Investigation:**   * Students are then given corrugated cardboard of different sizes. Students in pairs are blindfolded and feel the surfaces. They are asked to state which surface covers the most area to their partner or teacher. |
| LEARNING SEQUENCEExtensionES1 | **Closed shapes lesson:**   * Students can then log on to ‘Tux Paint’ or a paint program. They will be instructed to draw two closed shapes. Students are then to use the fill tool or to colour using their pencil the shape with the largest surface area.   **Non ICT Variation:**   * Students are given a piece of ribbon. They make lines and then shapes with the ribbon. They then draw these. The whole class join several ribbons to make a large area. They measure the area by covering it with their bodies. |
| **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.