**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: a | STRAND: NUMBER AND ALGEBRA | **SUB-STRAND:** WHOLE NUMBERS | **WORKING MATHEMATICALLY:**  MAe-1WM and MAe-3WM |
| **OUTCOMES: MAe-4NA** | | **Counts to 30, and orders, reads and represents numbers in the range 0 to 20** | | |
| **CONTENT:** | | **Subitise small collections of objects** (ACMNA003)   * recognise the number of objects or dots in a pattern of objects or dots instantly (to 6) * instantly recognise (subitise) different arrangements for the same number e.g different representations of five | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | **Teacher Observation** – record each student’s ability to instantly recognise dot patterns on a die without counting the dots | | |
| WARM UP / DRILL | | **Look and Say** – Hold up dot pattern cards for approximately one second each. Students state the number of dots that were shown on the card. This should be a fast “drill” activity to encourage automatic responses in students rather than the counting of dots. | | |
| 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 | | Dot card patterns, interactive whiteboard, standard dice (dot patterns from one to six), overhead projector or IWB, counters, dot pattern cards with raised dots | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| Dice observation – each student has their own die to explore. Ask students to find the side with a specified number of dots. Discuss how many dots on each side.  **Roll the Die Game** – teacher rolls the  die and students have turns to call out  the number shown as quickly as  possible. First person to call out the  correct number has the next turn of  rolling the die.  **Look and Say (Overhead or IWB)**  Make a pattern with transparent  counters on the overhead projector  and turn the light on for only a second. Students call out the number of dots they see. Switch the light back on for students to check their answer. Create similar game using IWB. | LEARNING SEQUENCERemediation | Drill dot pattern cards to 5. |
| LEARNING SEQUENCEES1 | **Look and Snap** – Place numeral cards in front of the group of students about to play this game. Briefly flash a dot pattern card to the students in the group. The aim of the game is for the students to recognise the dot pattern, say the number of dots they see and locate the corresponding numeral card. Students ‘snap’ the correct card by quickly placing their hand on the card. The first student to snap the correct card keeps it. Student with the most cards at the end of the game is the winner.  **Robot Race** – Provide each student with a set of ten dot pattern cards and a playing base board  (DENS Stage 1 BLM pp. 68 and 69). A nominated person shuffles the cards and places them face down on the ‘YOU WIN’ robot. Students take turns to draw dot pattern cards from the pack and  place them on the robot outline displaying a corresponding numeral. The first student to correctly place all cards and reveal the ‘YOU WIN’ sign on the baseboard is the winner.  **Make a Pattern** – provide students with ten counters to place on their desk. Display a dot pattern for approximately one second. Students quickly make the same pattern using the counters on their desks. Discuss the number of counters used to make the pattern.  ASSESSMENT: Can students instantly recognise dot patterns to 6? |
| LEARNING SEQUENCEExtension | **Double Dice Game –** Roll two dice simultaneously – students have turns at calling out total number of dots on the dice (without counting dots) |
| **EVALUATION & REFLECTION** | Discuss how instantly recognising small numbers of objects helps us with our Maths.  Ask students to explain in their own words what they have learnt. |

* 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.