**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 4 | STRAND: Number & Algebra | **SUB-STRAND:** Patterns & Algebra | **WORKING MATHEMATICALLY:**  MAe-3WM |
| OUTCOMES: MAe-3WM | | **Uses concrete materials and/or pictorial representations to support conclusions** | | |
| **CONTENT:** | | **Sort and classify familiar objects and explain the basis for these classifications (ACMNA005)**  \* Explain the basis for their classification of objects (Communicating, Reasoning) ICT  \* Students should be able to communicate using the following language: **group**, **pattern**, **repeat**.  \* Recognise, copy and continue repeating patterns using sounds and/or actions | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | * Assessment before: Questioning - 1. Have students identify a sound patterns *Anecdotal Notes* * Assessment after: Recording a sound pattern Work Sheet   Film or take photos of children performing their musical instrument sound pattern. Reflect & have students  discuss their observations. | | |
| WARM UP / DRILL | | Using Technology to Teach Mathematics:  Monster Choir: Making Patterns Monster Choir: Missing Monsters  **http://splash.abc.net.au/res/i/L1056/index.html**  **Count Us In - Making Patterns**  **http://www.abc.net.au/countusin/games/game2.htm** | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | Have students draw a pattern they have created Eg | | |
| 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 | | * IWB & Sites listed above - iPad - Sound Pattern work sheet * Percussion instruments, tambourine, drum, triangle, castanets | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| * **Lesson 1**   **People Patterns**  This activity encourages students to look for patterns in their environment. Ask one of the girls in the class to stand up, then call on a boy to stand beside her, then call on another girl, then another boy, and so on. When eight students are standing in a row, alternating girls and boys, ask the class: *Can you see a pattern in this row of children? Why is it a pattern?*   * **Lesson 2**   **Sound and action patterns**  Create repeating patterns with a sequence of different sounds or actions, such as: clap, clap, stamp, stamp, clap, clap, stamp, stamp …  Ask students to continue the patterns and describe them in words.  Create repeating patterns from the one sound or action, such as: clap, clap, clap [pause] clap, clap [pause] clap, clap, clap [pause] clap, clap ... | LEARNING SEQUENCEPre Foundation Skills | * Students are to repeat single movements. Then increase this to a two pattern of sound or action patterns. * Create a sound or action pattern and insert a deliberate error. Students raise their hands when they think they hear or see the error. |
| LEARNING SEQUENCEES1 | * Ask students to continue the patterns and describe them in words. * Students create their own sound or action repeating patterns. * Create a sound or action pattern and insert a deliberate error. Students raise their hands when they think they hear or see the error.   For example, clap, clap, finger-tap, clap, clap, finger-tap, clap, clap, finger-tap, clap, finger-tap…  Ask the students to suggest how you could draw a clap and a stamp.    Students using percussion instruments make a pattern with sounds to share with the class. Children may work in groups of 2.   * Record children’s patterns on iPad for displaying on IWB. Children identify patterns & record their observations with symbols (images provided & cut & paste activity). |
| LEARNING SEQUENCEExtensionS1 | * Have the students silently count three claps then on the fourth clap say, *four.* Continue silently counting three claps and counting out loud every fourth clap. Repeat the activity and have a student record on the board the numbers counted out loud. Ask the students to describe the sequence. * Modify the activity to create other sequences. For example, have the students: * Repeatedly count the fingers of one hand, tapping the first four fingers while counting them silently, then counting the thumb out loud. * Turn their hands palm-up and silently count the first two parts of each finger then count out loud the third part. |
| **EVALUATION & REFLECTION** |  |

* 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.