**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:   | WEEK: 1 | STRAND: NUMBER AND ALGEBRA | **SUB-STRAND:** WHOLE NUMBERS | **WORKING MATHEMATICALLY:** MAe-1WM, MAe-2WM, MAe-3WM |
| OUTCOMES: | **Counts to 30, and orders, reads and represents numbers in the range 0 to 20**  |
| **CONTENT:**  | **Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point*** identify the number before and after a given number
* describe the number before as ‘one less than’ and the number after as ‘one more than’
 |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * Best Start Assessment
 |
| WARM UP / DRILL | * Rote counting - starting from any given number on a hundreds chart
* Hidden Number – use ‘sticky notes’ to cover numbers on hundreds chart – students guess which numbers are hidden
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| 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 | Hundreds chart; sticky notes; ‘Bingo’ cards; Before and after charts |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| **King of the Circle – Number After**Ask the student to sit in a circle. Select one student to stand behind a second student in the circle. Roll one large dice in the middle of the circle. Ask the two students to call out the number that comes after/before the number rolled. The first student to call out the number successfully moves on to stand behind the next student in the circle. Repeat the activity for all students.**Variation – number before****Number Lines**Students write a numeral in a given range on a small square of paper. The teacher elects a student randomly to peg their number on a string hung across the room. Students discuss the placement. A second student is selected to peg their number on the string considering its placement in relation to the first number. This is repeated for all students, discussing where each number would go, before placement. e.gQuestioning:How do you know where the numbers go? What number comes before/after number 6? What numbers go between 5 and 7? | LEARNING SEQUENCERemediation  |  |
| LEARNING SEQUENCEES1 | **Bingo: The number after**Construct bingo cards for each student. Hold up a numeral card so that all students can see it. Begin with numerals in the range of two to eleven and then progress to numerals in the range of two to twenty-one. Have students check their bingo card, and if it contains a numeral which is one after the number displayed, they cover the numeral with a counter. The winner is the first student to cover all the numerals on the bingo card.Variations• Identify the numeral before the one shown, two after or two before.• Extend the range of numbers.**Before and After**Prepare “before and after” charts for each pair of students. Numerals are written down the centre column of the chart. These numerals should be within an appropriate range for the students. Students are given numeral cards to sort and place on the chart in either the “number-before” or “number-after” spaces to form number sequences.ASSESSMENT: Worksheet – Students write the number that comes before and after given numbers |
| LEARNING SEQUENCEExtension  | Adapt above activities to find before and after numbers in the range 0 to 50 |
| **EVALUATION & REFLECTION** | Discuss why it is important to know before and after numbers without having to count from 1.Discuss the language ‘one more than’ and ‘ one less than’. |

* 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.