**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: | STRAND: Number and Algebra | **SUB-STRAND:** Addition and Subtraction 2 | **WORKING MATHEMATICALLY:**  MA1-1WM & MA1-3WM |
| OUTCOMES: MA1-5NA | | **Uses a range of strategies and informal recording methods for addition and subtraction involving one and two digit numbers.** | | |
| **CONTENT:** | | **Use and record a range of mental strategies to solve addition and subtraction problems involving one and two digit numbers.**   * Counting on from the larger number to find the total of two numbers * Counting back from a number to find the number remaining * Counting on or back to find the difference between two numbers. | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | Using counters to add a sequence of numbers to 10 i.e 3 counters plus 5 counters to see where they are at with adding single digit numbers. | | |
| WARM UP / DRILL | | * Friends of Tens card matching. Two sets of numbers to ten. Each child given a card.   Find the person with the matching friend of ten card. i,e 7+3 , 4+6  Dice Toss- have 2 large dice and have students sitting in a circle. Students take turns to toss the dice to see what 2 numbers are rolled. Are they doubles or near doubles? What do they add up to? | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | Jack has 5 apples and sally has 10, how many apples do they have altogether? | | |
| 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 | | Paddle pop sticks, number lines, hundreds chart. | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| Explicitly communicate lesson outcomes and work quality. **Teach and review** whole class modelled activity using number line up to 20.  Complete additions starting on the largest number and adding extra numbers to it.  **Model language** e.g., add, plus, subtract, take away, digits, number line, counters, jump, forwards, backwards,  . | LEARNING SEQUENCERemediationES1 | Number line : using a number line to ten, give the students one counter. Model on the board a number sentence using one sigit numbers. Eg 3 = 4 = have the students start with counters on number 3 and move forward jumplng 4 places. What number do they land on? |
| LEARNING SEQUENCES1 | **Whole Class Instruction and Modelled Activities JUMP STRATEGY**  **\*Place a bundle of ten sticks in the centre of a circle of students. Ask: how many are there? (10) Place another bundle down and ask: how many now? (20) place three single stick down. Ask: how many now? (23) Record this on the board as 10 + 10 +3=23. Show students how it can be recorded as 10+13=23 and record it with the sticks.**  **Repeat using further examples 10 +12=, 10 + 16=**  **\*Draw number line on board. Give students a printed number line each. Read the following to the class.**  **Kelly the kangaroo wanted to work out 10 + 14 . She started at 10 on the number line and needed to jump forward 14 jumps.**  **Demonstrate how to use the number line how to: jump forward 14 jumps, at one time.**  **Jump forward 4 jumps (at one time)then 10 jumps (all at once)**  **Jump forward 10 jumps (all at once), then 4 more jumps (one at a time)**  **Repeat for other number sentences.**  **Repeat the process using subtraction. Students move counter back to take away modelled number sentences.**  **DOUBLES OR NEAR DOUBLES**  **Use modelled number sentences to add and take away doubles and near doubles on number lines and using counters.** |
| LEARNING SEQUENCEExtensionEarly S2 | 2 digit + 2 digit addition. Using hundreds chart, have students add and subtract 2 digit numbers moving their counter forwards or backwards to find the answer. |
| **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.