**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 2 | STRAND:Numbers and Algebra | **SUB-STRAND:**  Addition and Subtraction 2 | **WORKING MATHEMATICALLY:**  MA1-1WM MA1-2WM MA1-3WM |
| OUTCOMES: MA1-5NA | | Uses a range of strategies and informal recording methods for addition and subtraction involving 1 & 2 digit numbers | | |
| **CONTENT:** ACMNA030 | | Select and use a range of strategies to solve addition and subtraction problems involving 1 & 2 digit numbers   * check solutions using a different strategy * recognise which strategies are more efficient and explain why * explain or demonstrate how an answer was obtained for addition and subtraction problems | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | Sena 1 & 2 TENS assessment  Questions requiring student to demonstrate knowledge of friends of 10 and 20 as able  Classroom observation and anecdotal notes | | |
| WARM UP / DRILL | | “How did you do it?” Write addition or subtraction questions on board and ask students to share how they worked it out  “The answer is \_\_\_\_What is the question?” Write a number on the board and students generate questions to match the answer using addition or subtraction | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | The learning activities described form the basis of the TENS program for the week | | |
| 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 | | Decks of cards – numerals 1-30 in both red and black; unifix cubes; 100’s charts for students; counters;100’s chart on IWB; large whiteboard | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| Model use of the 100’s chart for addition on the IWB. Start with 2 single digit numbers and ask students to solve. Encourage use of different mental strategies eg. friends of 10, doubles + - 1. Add more numbers to the total, each time trying to use different strategies eg. jump and split, and checking solution on the 100’s chart. Talk about the most efficient strategy for each problem. Use large whiteboard for students to show their strategies.  Follow the same procedure for some subtraction problems, starting with taking away a single digit from 10, then building to larger numbers.  A different strategy could be specifically taught or revised each day. | LEARNING SEQUENCERemediationES1 | **Build a Tower** – Play as in S1 but start with a tower of 10 cubes. Play continues until a player builds a tower of 20 cubes. Add and subtract 1 digit numbers only. Encourage counting on from or down from existing number. |
| LEARNING SEQUENCES1 | **Build a Tower** – Play in pairs or small groups. Each player starts with a tower of 20 unifix cubes. Player one turns over a card and follows the rule eg. red 8 card (subtracts) black 8 card (adds). Use 100’s charts to check answers. Play continues until one player builds a tower of 40 (or 2 towers of 20)  **Assessment –** observation of strategies used noting reliance on one or use of variety of strategies  Investigation: use of number facts, doubles, friends of 10/20, jump and split strategies to solve addition and subtraction problems |
| LEARNING SEQUENCEExtensionEarly S2 | **Race to 100** – Students work with a 100’s chart and start with a counter on 50. Turn over cards (1-20 range) and add or subtract the number according to colour. Move the counter on the chart. Explain the strategy used to partner. Check using mini whiteboards and alternate strategy. |
| **EVALUATION & REFLECTION** |  |