**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 4 | 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 variety 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) | | Check friends of 10 with tens frame and mental facts TENS assessment  Doubles – join 2 equal groups of unifix cubes to show a double fact. Write algorithm eg. 5 + 5 Add 1 cube (or more) and ask student to solve and write the new algorithm assessing strategy used. | | |
| WARM UP / DRILL | | Body part count – by 5s (fingers), by 2s (hands)  Oral counting up and down from a given number eg. from 36 up to 50 or count down from 27 to 3  Rabbits ears – students hold up fingers to represent numbers given. Group some and look for doubles and friends of 10/20 | | |
| 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 | | Dice – 6 sided, 12 sided and 20 sided for extension; whiteboards and markers | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| Model rolling 2 dice and counting on from the larger number to get the total.Now roll 3 dice and ask students to suggest strategies to add them up. Roll 4 dice and write down the numbers on the whiteboard. Ask for suggestions on how they can be grouped for addition. Use lines to show groupings and draw down lines for the subtotals. Students suggest strategies for combining the totals and the teacher shows the working out. Check the answer with a different strategy. Teacher then gives a number and asks students to describe how many more or less the answer is compared to the new number.  Students explain or demonstrate the strategy used. | LEARNING SEQUENCERemediationES1 | Addition **Two Dice** – Students roll 2 dice and record the numbers on a whiteboard. Encourage students to count on from the larger number and recall friends of 10 |
| LEARNING SEQUENCES1 | Addition **Five Dice** – Students roll 5 dice and write down the numbers. The aim is to roll numbers that add up to 20. Students look for friends of 10, doubles, plus one etc when adding the combinations to get the total. Students show working on whiteboards. Verify calculations with a partner and then work out the difference to 20 eg. I have 3 less than 20 or I have 5 more than 20.  **Assessment** – students report back to the class demonstrating strategies used  Investigation: Addition facts up to 20, friends of 10, doubles |
| LEARNING SEQUENCEExtensionEarly S2 | Addition **Five Dice** – Play as in S1 but use 12 sided dice or larger so that students are adding 2 digit numbers as well as 1 digit numbers |
| **EVALUATION & REFLECTION** |  |