**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 4 | STRAND: Number and Algebra | **SUB-STRAND:** Addition and Subtraction 2 | **WORKING MATHEMATICALLY:** MA1-1WM and 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:**  | **Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030)*** use and record a range of mental strategies to solve addition and subtraction problems involving two-digit numbers, including: CCT
	+ the jump strategy on an empty [number line](http://syllabus.bos.nsw.edu.au/glossary/mat/number-line/?ajax)
	+ the split strategy, eg record how the answer to 37 + 45 was obtained using the split strategy 30+40=70 7+5=12 so 70+12=82
	+ an inverse strategy to change a subtraction into an addition, eg 54 – 38: start at 38, adding 2 makes 40, then adding 10 makes 50, then adding 4 makes 54, and so the answer is 2 + 10 + 4 = 16
 |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | TEN Assessment – See attachedPLAN data for Early Arithmetical Strategies |
| WARM UP / DRILL | Play a game of higher and lower using a number line to 30. |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | This program forms the basis of the TENs activities 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 | Numeral cards, number lines to 10, 20 or 30,  |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |
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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| ***Kindergarten:*** Play a game of higher or lower using a number line, from 1 to 10.***Year 1:*** Play a game of higher or lower using a number line to 20. Practice the teen numbers and highlight the one comes first.***Year 2***: Play a game of higher and lower using a number line to 30.  | LEARNING SEQUENCERemediationES1  | *Perceptual/Figurative*Students order a set of numeral cards to 10. They are to locate pairs of numbers that are friends of ten. They are allowed to use their fingers to count. As an extension they can order a set to 15 or 20 and add numbers together. They would be encouraged to use their fingers and get across the decade.**Teaching Point**Friends of ten, representing the count, moving across the decade. |
| LEARNING SEQUENCES1 | *Counting On and Back*Students order a set of numeral cards to 20. They then select pairs of numbers that will add together to make friends of 20. They can also find numbers that will add or subtract together to the “magic’ number determined by the teacher. They are encouraged use their knowledge of doubling and friends to/of ten.**Teaching Point** Doubling, friends of twenty, friends to ten |
| LEARNING SEQUENCEExtension Early S2 | *Facile*Students order a set of number cards to 20. They then locate numbers that will add together to a ‘magic’ number to be determined by the teacher. It can be more than one number; it could be addition/subtraction or doubling etc.**Teaching Point** Variety of efficient mental strategies. |
| **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.