**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 2 | 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 | Flash card tens frames. 2 at a time. Explicitly model how to visualise and count on or back from the largest. |
| 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 | Dotted tens frames, Double sided counters, whiteboards, markers, blank tens frames |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| ***Kindergarten:*** Hold up dotted tens frames and ask students to count what they can see. Model counting the top row and then the bottom.***Year 1:*** Flash card tens frames. Explicitly demonstrate visualising what was seen as it is only a quick flash.***Year 2***: Flash card tens frames. 2 at a time. Explicitly model how to visualise and count on or back from the largest. | LEARNING SEQUENCERemediationES1  | *Perceptual/Figurative*Shake rattle and drop 10 counters. Place counters on a ten frame. Discuss: How many red counters? How many yellow counters? How many altogether?**Teaching point**Counting groups and use the word ALTOGETHERe.g There are 3 red counters and 7 yellow counters . There are 10 altogether. |
| LEARNING SEQUENCES1 | *Counting On and Back*One partner shakes rattles and drops 10 counters whilst the other closes their eyes. He/she then covers one colour. Student opens eyes and “counts on” to find missing addend.Record missing addend on whiteboard.**Teaching Point**Count on from a number to find missing addend. |
| LEARNING SEQUENCEExtension Early S2 | *Facile*One partner shakes rattles and drops 20 counters whilst the other closes their eyes. He/she then covers one colour. Student opens eyes and uses knowledge of friends of 20 to find missing addend.Record missing addend on whiteboard. **Teaching Point** Using combinations to 20 |
| **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.