**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 1 | 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
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | TEN Assessment – See attachedPLAN data for Early Arithmetical Strategies |
| WARM UP / DRILL | Flash card of enlarged dominos. Have students call out the number of dots they see. Students are asked how many dots they see. They are also asked to explain how they see them. This can form a basis for assessment of children’s mental strategies. It also allows the teacher to clue the children in the strategy for the week i.e. doubles plus 1, doubles minus 1 |
| 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 | Flash card dominoesDominoes (double 6 and double 9)Whiteboards, pens |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Begin the lesson with flash cards of dominoes. (Double 6 or Double 9)Ask the students to call out the amount of dots they see. The students must state how they saw them (some may say, “I saw one number and counted on”) This is an acceptable answer as students in Year 2 should be at the counting on and back stage. As such the lesson is pitched at moving those students to facile.Explain to the students they need to use their knowledge of doubles to help them. Flash cards that are doubles and then doubles plus one, or minus one. Practice this explicit strategy.Ask the students the following questions* How many dots did you see?
* How did you work it out?
* What did you do first?
* Is there a more sophisticated way?
 | LEARNING SEQUENCERemediationES1  | Perceptual/Figurative |
| LEARNING SEQUENCES1 | *Counting On and Back*In pairs, students take turns to turn over 2 dominoes each. The students then work out the total by using their knowledge of doubles, doubles plus 1, doubles minus 1 or friends of ten.Students then record this as a number sentence. Students need to draw lines to connect the numbers they added first and second.Students need to be able to explain the numbers they have added and why they chose those. |
| LEARNING SEQUENCEExtension Early S2 | Facile |
| **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.