**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 6 | STRAND: Number and Patterns  | **SUB-STRAND:** **Patterns and Algebra 2** | **WORKING MATHEMATICALLY:** MA1-1WM, MA1-2WM, MA1-3WM |
| OUTCOMES: MA1-8NA | **Creates, represents and continues a variety of patterns with number objects** |
| **CONTENT:**  | **Solve problems by using number sentences for addition and subtraction (ACMNA036)*** Represent a word problem as a number sentence (Communicating, Problem Solving)
* Pose a word problem to represent a number sentence (Communicating, Problem Solving)
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | What information are we looking for in word problems to tell us what to do?How do we write a number sentence? |
| WARM UP / DRILL | Revising ‘Friends of 10’ and ‘Friends of 20’.Counting by 2s, 3s, 4s, and 5s to 100, both forwards and backwards. |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | TENS Activity- Unifix Cubes (see Week 4 TENS program) |
| 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 | Think Board, Whiteboards, Whiteboard markers |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| The Herrington Think Board is one way to organise and solve problems with students that also focuses on the language of mathematics.E.g. the teacher can supply the story "Mary had five oranges, Tom took two away, how many oranges does Mary have left?"Students can then draw a picture of the story, use objects such as counters or play dough to create and work out the problem, then record a number sentence that matches the story.To focus on the language, provide students with the number sentence and ask them to write a story to match.http://www.schools.nsw.edu.au/learning/7-12assessments/naplan/teachstrategies/yr2012/images/nn_numb_s1d_12_1.jpgDisplay this to students and provide a number of examples.<http://au.ixl.com/math/year-2/write-addition-sentences-to-describe-pictures><http://au.ixl.com/math/year-2/write-the-subtraction-sentence-up-to-18> | LEARNING SEQUENCERemediationES1  | * Students are given a number from 1-10. Using counters students need to come up with a number of combinations that total the number and list them on their whiteboard. Students work on immediately recognising ‘Friends of 10’.
* Provide group with simple addition word problems and work through as a group.

<http://au.ixl.com/math/year-2/addition-word-problems-one-digit> |
| LEARNING SEQUENCES1 | * Students are given a number of addition and subtraction problems in sentences. Students need to read the sentences and decided what number operation is needed. Students then write the number problem in numerals and answer. Students complete a number of examples as a group, before moving off and attempting problems independently. (Anecdotal records- record on Ipad)

<http://www.k5learning.com/free-math-worksheets/second-grade-2/word-problems><http://www.primaryresources.co.uk/maths/mathsD1.htm><http://www.softschools.com/math/word_problems/worksheets/>(Worksheet generator) |
| LEARNING SEQUENCEExtension Early S2 | * Students are given the answers to number problems. They need to write a word problem that would be asking the answer response. What information needs to be included? What language do students need to include so that the reader knows if it is an addition or subtraction problem?
* Provide students with worksheet including addition and subtraction word problems to complete independently.
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| **EVALUATION & REFLECTION** | Are students able to locate information within a sentence to complete a number problem? |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.