**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM: | WEEK: 5 | 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 attached  PLAN data for Early Arithmetical Strategies | | |
| WARM UP / DRILL | | Bucket drop: Start with a number of blocks in the bucket. Students are encouraged to listen as the blocks are being dropped into the bucket and count on from the number. Blocks can be removed from the bucket and dropped into another bucket to count backwards. | | |
| 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 | | Unifix cubes, bowls, buckets, five or tens frames | | |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |  |
| --- | --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| ***Kindergarten:*** Students practice counting blocks as they are dropped into the bowl.  ***Year 1:*** Bucket drop: Start with a no blocks in the bucket. Students are encouraged to listen as the blocks are being dropped into the bucket and count them on their fingers. Use numbers above 10 so they can start to see their fingers as markers.  ***Year 2***: Bucket drop: Start with a number of blocks in the bucket. Students are encouraged to listen as the blocks are being dropped into the bucket and count on from the number. Blocks can be removed from the bucket and dropped into another bucket to count backwards. | LEARNING SEQUENCERemediationES1 | *Perceptual/Figurative*  Teacher places 5 blocks on top of upside down container. Partner closes eyes and child takes some off and puts them underneath. Partner guesses how many are underneath. Lift container and check.  Begin with 5 blocks. Use 5 frames for support. Can increase t0 10 blocks. 10 blocks – allow students to look under bowl, if needed.  **Teaching Point**  Visualising combinations of five and ten. |
| LEARNING SEQUENCES1 | *Counting On and Back*  Increase the number of blocks and not on a decade (e.g. 15)  Students are encouraged to use knowledge of doubles and friends of ten and twenty to find the answer.  Encourage students to check answer by counting back.  **Teaching Point**  Friends of ten  Doubles, near doubles |
| LEARNING SEQUENCEExtensionEarly S2 | *Facile*  Use up to 20 blocks.  Students multiply answer by 2 or another.  Use pairs of cards that equal a set number. Say the game is called ‘40’. Each pair of cards equal 40 (Have a design on the back that matches each pair). Put 2 matched designed cards face down. Flip one number over and do any strategy it takes to get to 40. Then flip the other card over to check your work. If correct, you keep the pair. The one with the most pairs, wins.  **Teaching Point**  Multiplication |
| **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.