**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM: | WEEK: 11 | 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)**   * Make connections between addition and subtraction facts to at least 20 (Reasoning) * Solve problems involving addition or subtraction by using number sentences | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | Questioning: Can students give examples of friends of 5 and 10? | | |
| WARM UP / DRILL | | Students counting by 2s, 3s, 5s and 10s to 100 (Forwards and backwards)  Students state “Friends of 10”. | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | TENS Activity: Tens Frame | | |
| 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, counters, TENS frame, red and blue blocks, whiteboards, whiteboard markers | | |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |  |
| --- | --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| Discuss how to use an equal arm balance with students. Encourage them to use the terms ‘equal’ and ‘the same’.  Divide students into pairs. On a piece of paper, have each pair draw an equal arm balance.  Give each student 10 red blocks and 10 blue blocks. Ask Student A to place any combination of red and blue blocks on their side of the equal arm balance (e.g. 4 red blocks and 4 blue blocks, making a total of 8).  Student B then places a different combination of red and blue counters on their side of the board to balance student A’s blocks (e.g. 2 red blocks and 6 blue blocks.)  Have students record their finding using drawings.  Students share their findings with the class.  Display some of the number combinations on the whiteboard and find the subtraction number sentence shown in each question (e.g. 2+5=8, 8-3=5 and 8-5=3).  Students return to their pairs and find the addition and subtraction questions using 10 blocks.  [www.aaamath.com/g210a\_x1.htm](http://www.aaamath.com/g210a_x1.htm)  (Inverse Relationship of Addition and Subtraction)  <http://au_ixl.com/math/year-2>  (Writing addition and subtraction sentences.) | LEARNING SEQUENCERemediationES1 | * Guess My Number Game:   Children form groups or pairs. One child chooses a number and the others must guess it.  To assist with ‘trial and error’ strategy, play this game with answers of ‘higher’ or ‘lower’ to guided more guesses. |
| LEARNING SEQUENCES1 | * Target Number Concentration Game:   Children play in groups. One child suggests a number. A set of cards numbered 1-10 are placed down. The object is to turn up two cards, that when added together are equal to the target number. They take turns to turn two cards up. If they do not add to the target number, they are place back face down.    When students are confident with friends of ten facts, move to friends of twenty. (anecdotal) |
| LEARNING SEQUENCEExtensionEarly S2 | * Money Addition:   In the class shop, label items with prices $1-$20. Provide children with play money and opportunities to buy items. After free play, pose problems, e.g. What can you buy with $20? What can you buy with $15?   * Have students look at old catalogues to find items that cost under $10. Children cut out two items, write number sentences and use a number line to find the total cost of the two items. |
| **EVALUATION & REFLECTION** | Are students able to instantly recall number facts to 10 and 20?  Can students make subtraction and addition number sentences? |