**MATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM:  | WEEK: 4 | STRAND: Number and Algebra | **SUB-STRAND:** Multiplication and Division 1 | **WORKING MATHEMATICALLY:** WA2-1WM MA2-2WM MA2-3WM |
| OUTCOMES: | **Selects and uses appropriate mental or written strategies, or technology to solve problems****Checks the accuracy of a statement and explains the reasoning** |
| **CONTENT:**  | \* Use mental strategies to multiply a one digit number by a multiple of 10\* Use place value concepts, eg 3 x 20: 3 x 2 tens = 6 tens = 60 |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | WORKSHEET - Mathletics YR3, page 6 of Multiplication and Division student book.  |
| WARM UP / DRILL | * Skip counting by 10s
* Bingo using 10 times tables
 |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | Alex lives 5 kilometers from his school. How far does he travel each week to get to school and back? |
| 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 | IWB materials on tens, worksheets on multiplying by ten, concrete materials such as counters, Mathletics, Studyladder |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |
| --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Explicit TeachingExplain how to use mental strategies to multiply a one digit number by a multiple of 10, including* repeated addition, eg 3 x 20: 20 + 20 + 20 = 60
* using place value concepts, eg 3 x 2 tens = 6 tens = 60
* factorising the multiple of 10, eg 3 x 2 x 10 = 6 x 10 = 60

**Define and Reinforce*** Discuss and define the metalanguage used in the unit: tens, zero, repeat, multiply, times

**IWB*** Using IWB resources, introduce and demonstrate activities on the board that relate to and involve multiplying by tens.
 | LEARNING SEQUENCERemediationS1 or Early S2 | * Revise skip counting aloud by 10’s
* Repeated addition, arrays, using concrete materials
 |
| LEARNING SEQUENCES2 | * Have students make models of multiplication facts using arrays, eg 3 lots of 20 = 60.
* Flash cards with multiplication sums, eg 6 x 30
* Matching games, snap, etc using cards showing the total, repeated addition, place value and factorising. Eg 40, 2 x 20, 20 + 20, 2 x 2 x 10

**Investigation*** Students work in small groups. Give them a problem involving multiplying a one digit number by a multiple of 10, ask them to record different strategies to solve it. Discuss.

ASSESSMENT - Observation of student work, assessment worksheets |
| LEARNING SEQUENCEExtension Late S2 or Early S3 | EXT – multiply a one digit number by hundreds, thousands eg 6 x 300, 8 x 2000  |
| **EVALUATION & REFLECTION** | Student engagement Achievement of outcomesResources Follow up |