**MATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

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| 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**

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| 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 SEQUENCEExtensionLate 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 outcomes  Resources Follow up |