**kkkMATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 2 | STRAND: Number and Algebra | **SUB-STRAND:** Multiplication and Division 1 | **WORKING MATHEMATICALLY:**  WA2-1WM MA2-2WM MA2-3WM |
| OUTCOMES: | | **Uses appropriate terminology to describe , and symbols to represent, mathematical ideas.** | | |
| **CONTENT:** | | \* Recognise and use the symbols for multiplied by (x), divided by (÷) and equals (=)  \* Model and apply the commutative property of multiplication, eg 5 x 8 = 8 x 5 | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | WORKSHEET - Mathletics YR3, page 2 of Multiplication and Division student book. | | |
| WARM UP / DRILL | | * Multiplication memory using cards on the floor – match question and answer * I’ll give you a fact, you give me a fact: students stand at desks, teacher give a multiplication or division fact of 2,5 or 10. One by one, students give an associated fact – if they get it wrong they sit down. Last left standing wins. | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | I count 20 legs in the paddock. How many ducks and how many sheep in the paddock? How many solutions can you find? | | |
| 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 arrays, hundreds chart to show 2’s, 5’s, 10’s and 3’s, worksheets on multiplication and division symbols, concrete materials such as counters, Mathletics, Studyladder | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| Explicit TeachingLook at arrays of 2s, 3s, 5s and 10s. Describe as 3 rows of 2, introduce symbol x and describe as 3x2, etc.  * Explicitly teach and discuss repeated addition and its relation to multiplication. Introduce division the same way, use symbol ÷ to match arrays. Show how 3 x 2 = 2 x 3.   **Define and Reinforce**   * Discuss and define the metalanguage used in the unit: array, multiply, multiplied by, groups, rows, equals, divided by, lots of.   **IWB**   * Using IWB resources, introduce and demonstrate activities on the board that relate to and involve multiplication and division using symbols. These include matching games and memory games. | LEARNING SEQUENCERemediationS1 or Early S2 | * Revise skip counting aloud 2’s, 5’s and 10’s * Repeated addition, arrays, using concrete materials |
| LEARNING SEQUENCES2 | **Investigation**   * Fill in the missing symbol to make number sentences true, eg 3 \_\_\_5 = 15 * Multiplication concentration game, Mathletics teachers’ book p.34,35: match products to answers. Do in pairs or small groups. * Product Bingo – Mathletics teachers’ book p. 36 * Model arrays and reinforce language. Link with multiplication eg 2 rows of 8 = 2 x 8, 8 rows of 2 = 8 x 2. * Use concrete materials to make arrays, match to labels, make own. * ASSESSMENT - Observation of students using correct symbols to match arrays, observation of how students complete worksheets and games. |
| LEARNING SEQUENCEExtensionLate S2 or Early S3 | EXT – Use correct symbol to complete number sentences for more complex operations, using higher numbers. |
| **EVALUATION & REFLECTION** | **Student Engagement Achievement of Outcomes**  **Resources Follow up** |