**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 9-10 | STRAND: Number & Algebra | **SUB-STRAND:** Multiplication & Division 2 | **WORKING MATHEMATICALLY:** MA1-1WM |
| OUTCOMES:  | MA1-1WM describes mathematical situations and methods using everyday and some mathematical language, actions, materials, diagrams and symbolsMA1-2WM uses objects, diagrams and technology to explore mathematical problemsMA1-3WM supports conclusions by explaining or demonstrating how answers were obtainedMA1-6NA uses a range of mental strategies and concrete materials for multiplication and division |
| **CONTENT:**  | * Skip count by twos, fives and ten starting from zero
* Modelling equal groups of objects
* Objects can be counted in equal groups
* Using repeated addition to find the total number of objects in groups
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * Student’s counting knowledge
* Counting using 1-1 correspondence
* Ability to make equal groups
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| WARM UP / DRILL | * Reciting skip counting patterns as a class for 2, 5 & 10
* Students to place counters on a 100s chart to a given show skip counting pattern
* On IWB using an interactive 100’s chart, teacher begins to flip/ colour numbers and students are asked to identify the skip counting pattern given these clues.
* Flashcards prepared of equal groups- students to quickly identify what they see – E.g. Common dot patterns
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| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | Teacher to make up culturally relevant word problems that encourage students to use multiplication strategies.E.g. There were 5 cars parked outside the school. Each car was going to take 4 children to their home. How many children were going to get a lift home from school in a car. Remember to ask students to demonstrate how they arrived at the answer. |
| 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
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| RESOURCES | Interactive 100s chart on the IWB, Class sets of number lines and 100s charts, counters, skip counting songs (YouTube) and poems, SKWIRK IWB support material. DENS book.http://nswcurriculumsupport.wikispaces.com/Stage+1 |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Model rhythmic skip counting patterns and use these incidentally throughout the day.* Model making equal groups of objects and explaining why they are equal
* Model labelling of equal groups using words and numbers
* Model repeated addition stories
* Introduce the ‘x’ sign to represent multiplication
* Model writing multiplication sentences
* Model the commutative property of multiplication.
 | LEARNING SEQUENCERemediationES1  | * Counting using 1-1 correspondence
* Counting & labelling groups by number
* Matching groups as being the same or different
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| LEARNING SEQUENCES1 | * Show students two groups of mixed objects that have the same number of objects in each group. Ask students to describe the groups and comment on any likeness between them.
* Students working in pairs can make various numbers of equal groups and ask their partner to describe them. *(At this stage it may be helpful to have concrete material such as margarine containers or Brenex squares to indicate the groups onto which students place the number of items e.g. counters into each group.)*
* Ask students to make varying numbers of equal groups e.g. 4 groups of 2 and have students describe what has been made.
* Progress to labelling each group E.g. 2 groups of 3
* Students are then asked to total the groups and represent their knowledge in a repeated addition story and multiplication story. EG. 3 groups of 2 equal 6, 2+2+2 =6, 3x2=6
* Students represent equal groups using by drawing & labelling
* *Investigation:* Students are given a number on a card and are asked if equal groups of eg.2, 5, or 10 can be made. E.g. Can you make 2 equal groups using 16 counters? Predict 1st then check. Extension: How many different combinations of equal groups can be made using e.g. 12 objects.

**Consolidation Activities:** * Students roll 2 die. 1st dice indicates the number of groups to be made and the 2nd the number of items to be placed in each group.
* Maths programs such as Rainforest Maths- Multiplication
* Students represent equal groups in **Word** documents using the **Shape** tools.

**Students Reflecting on their Learning:**Students could write a reflection about what they have learnt about these equal group activities in their Maths Journal. |
| LEARNING SEQUENCEExtension Early S2 | Do activities similar to those above but use larger numbers or dice with more faces and hence larger numbers. |
| **EVALUATION & REFLECTION** | Student engagement Achievement of outcomesResources Follow upObserve students during activities and make anecdotal notes about progress. Collect work samples that demonstrate the working mathematically aspect of the planned activities. |