**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 8 | STRAND: Number | **SUB-STRAND:** Fractions & Decimals | **WORKING MATHEMATICALLY:** MA1-1WM |
| OUTCOMES: MA1-7NA | **Represents and models halves, quarters and eighths** |
| **CONTENT:**  | * **Recognise and describe one-half as one of two equal parts of a whole (ACMNA016)**

\* describe the equal parts of a whole object, eg 'I folded my paper into eight equal parts and now I have eighths' (Communicating) http://syllabus.bos.nsw.edu.au/wsimages/cca/l.png\* discuss why one eighth is less than one quarter, e.g. if a cake is shared among 8 people, the slices are smaller than if the cake is shared among four people (Communicating, Reasoning) CT |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * Teacher poses the question to the class " If I shared a cake among four people, would the slices of cake be smaller or larger than if I shared the same cake with eight people. Why?"
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| WARM UP / DRILL | * IWB Rainforest Maths - quarters.
 |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  |  |
| 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 | Rainforest Maths, Targeting Maths Lab 2, Pikelets and Lamingtons, http://www.maths-games.org/fraction-games.html |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Explicitly communicate lesson outcomes and work quality.* **Teach and review** a half is one of two equal parts of a whole or a group. one-quarter is one of four equal parts and one-eighth is one of eight equal parts of a whole or a collection. Use fraction notation to record sharing and dividing.
* Worksheet - Find a quarter of a collection and label.
* **Define and Reinforce metalanguage used in the unit** eg whole, part, equal parts, one-half, halves, one-quarter, one-eighth, 1/2, 1/4, 1/8.
* **IWB** - Rainforest Maths Identifying objects that have been divided in quarters and quarter of a collection.
 | LEARNING SEQUENCERemediationES1 or Early S1 | * IWB - Targeting Maths Lab 2 Fractions
* Worksheet - Circling half or quarter of shapes or collections and label.
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| LEARNING SEQUENCES1 | **Investigation:*** Pizza Fractions - complete the pizza puzzle using 1/2 or 1/4 or1/8 for each pizza. How many pieces does each pizza have? Which pizza would have the largest / smallest slice? Explain why.
* Students write their own fraction problems involving quarters and eighths that can be solved by drawing pictures. Share the stories that they have written.
* Assessment: Problem solving tasks revising fraction notation, dividing collections of objects, drawing diagrams to solve problems.
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| LEARNING SEQUENCEExtension S2 | * IWB - game ordering fraction notation (1/4 is the same as 2/8)
* Students are given a number eg 16 and they need to find out if it can be divided in half, quarters or eighths. Record their findings.
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| **EVALUATION & REFLECTION** | **Student Engagement:** | **Resources:** |
| **Achievement of Outcomes:** | **Follow-up:** |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.
* Assessment rubrics or marking scale should be considered.