**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM:  | WEEK: 6 | 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)**

\* Use concrete materials to model a half, a quarter or an eighth of a whole object, eg divide a piece of ribbon into quarters  |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * Students fold given shape such as a square into quarters.
 |
| WARM UP / DRILL | * Doubling and halving given numbers.
 |
| 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
 |
| RESOURCES | Rainforest Maths, Targeting Maths Lab 2, Pikelets and Lamingtons, brenex squares, |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |
| --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Explicitly communicate lesson outcomes and work quality.* **Teach and review** dividing concrete materials into halves, quarters and eighths. Counting the pieces and describing them as halves, quarters or eighths.

Divide collections as above and describing them as halves, quarters or eighths.* Students cut a variety of paper shapes into halves, quarters and eighths. They count the pieces. Describe how the pieces are alike. Use the terms halves, quarters or eighths to describe them.
* **Define and Reinforce metalanguage used in the unit** eg whole, part, equal parts, half, quarter, eighth, one-half, one-quarter, one-eighth, halve (verb)
* **IWB** - Rainforest Maths Identifying objects that have been divided in half
 | LEARNING SEQUENCERemediationES1 or Early S1 | * Folding circles, squares, triangles etc in half. Describe & count the pieces.
* Match labels to items that are divided equally into two parts.
 |
| LEARNING SEQUENCES1 | **Investigations:*** Using small disposable plates (2, 4 or 8) share a collection of counters etc so that each plate has an equal share. Students describe them using labels of half, quarter or eighth.
* Using lengths of string, ribbon or strips of paper students discuss how they could divide them into halves, quarters or eighths.
* Cut balls of plasticene, fruit, symmetrical pictures etc into halves, quarters or eighths. Discuss what is each piece called, what parts are the same eg two quarters are the same as one-half.
 |
| LEARNING SEQUENCEExtension S2 | * Naming fractions - how many parts have been coloured?
* Renaming fractions - two-quarters is the same as one-half.
* Finding the larger fraction. eg 2/4 & 3/4
 |
| **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.