**MATHEMATICS ES1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 1 | STRAND: Number and Algebra | **SUB-STRAND:** Fractions and Decimals | **WORKING MATHEMATICALLY:** MAE-1WM MAE-3WM  |
| OUTCOMES: MAE – 7NA |  **Describes two equal parts as halves** |
| **CONTENT:**  | **Establish the concept of one –half*** Share an object by dividing it into two equal parts, e.g. cutting a piece of ribbon into halves.
* Describe how to make equal parts (communicating)
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * Practical: Students to fold a strip of paper (small rectangle) in half. Students to colour each half in a different colour, then cut along the fold. Students to glue two halves together on larger piece of coloured paper or card.
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| WARM UP / DRILL | * Explain to class that a half is two equal parts. Provide students with concrete materials that can be divided equally in order for them to visually see how they can be divided evenly in half. Items such as oranges, play dough and simple 2D shapes such as squares and circle are ideal. Demonstrate to students how to find half by cutting / dividing these objects as the students observe.
* IWB U-Tube: Halves. Count us in beach game (IWB)
* Rainforest Maths & www.coolmath-games.com
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* IWB: U –Tube: Halves
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| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | If Johnny had 2 apples and he cut both apples in half, how many halves would he have altogether? |
| 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 | Paper plates, scissor, glue, A4 coloured paper/cardboard, IWB, fruit, playdough, 2D shapes (circles, squares), bread, margarine, sprinkles(fairy bread),plastic knives, symmetrical pictures (outlines / proformas |

**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 the concept of whole and half.
* Define and reinforce metalanguage used in unit- e.g.: whole, halves are two equal parts.
* The teacher demonstrates cutting a piece of fruit into two equal pieces.
* Provide students with a variety of pictures & shapes to fold in half, students then cut along the fold of symmetry.
* IWB activities
 | LEARNING SEQUENCERemediationES1  | * Review / revise concept of whole and halves.
* Students investigate and identify a variety of objects/ concrete materials that are whole and can then be divided into two equal parts.
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| LEARNING SEQUENCES1 | **Whole class instruction/Modelled and small group activities.*** Fairy Bread: In pairs, students make fairy bread and discuss a ‘whole piece’. Students cut fairy bread into two equal parts and share with partner.
* Students investigate a variety of objects e.g. a length of string/ribbon, symmetrical pictures, fruit, cups (both half and full measuring cups) of water or rice. Students discuss: how they would divide/ cut/pour each object into halves, how they would check if the two parts are equal. This links in with volume & capacity.
* Investigation: Provide students with play dough, roll different coloured play dough into balls or cylinders. Provide plastic knives, and encourage students to cut play dough shapes in half. Photograph as evidence. Get children to try and cut the same shape in a variety of different ways and discuss.
* Assessment: Students are given three paper 2D shapes (circle, square and rectangle). Students to fold paper in half, then cut along the fold to make two equal parts. Glue onto another A4 sheet of paper/ cardboard. (Teacher to make notes whether cut was made on the fold, and if the end result indicated **two equal** parts.)
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| LEARNING SEQUENCEExtension Early S2 | **Extension:** Students are given three paper squares and are asked to fold the paper squares into halves in at least two different ways. Students explain and justify how they know it is a half. |
| **EVALUATION & REFLECTION** | Student engagement: Achievement of outcomes:Resources: 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.