**MATHEMATICS ES1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 4 | STRAND: Number and Algebra | **SUB-STRAND:** Fractions and Decimals | **WORKING MATHEMATICALLY:** MAE-7NA MAE-1WM  |
| OUTCOMES: Mae-3WM | **Uses concrete materials and/or pictorial representations to support conclusions** |
| **CONTENT:**  | **Establish the concept of one –half*** Use the term ‘half’ accurately in everyday situations
* Record halves of objects using drawings
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * Practical: Students to select 3 objects in the room, such as a book, pencil, shoe, dice, toy. Students draw the item as a whole, and then draw the object in two equal parts.
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| WARM UP / DRILL | * IWB: I want my half: Select different students to complete the interactive activity within the session. .
* Using a paper plate, explain to students that you are going to pretend the plate is a pizza, and you want to share it with a friend. Demonstrate cutting the plate into two unequal parts. Hold the pieces up, and ask if they are the same. How can I divide the plate so that the two pieces are the same size? Demonstrate several examples of cutting **unequally**. Show students two halves; ask if they are the same. How do you know?
 |
| 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 | Paper plates, scissor, glue, A4 coloured paper/cardboard, IWB, fruit, playdough, 2D shapes (circles, squares), pencils, counter, Book: Give me half (Stuart Murphy), plastic cups / containers, sand or water, Shape proforma for assessment task. |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| * Review / revise concept of whole and halves.
* Emphasise this in terms that the students can understand: “It wouldn’t be fair if one half was bigger than the other half”. Also emphasise that when you split something in half, you make a fraction by taking a **whole and** turning it into two equal parts.
* Emphasise the language of ‘two equal parts’ when describing half. In everyday usage the term ‘half’ is sometimes used to mean one of two parts and not necessarily two equal parts, e.g. “I’ll have the biggest half”.
 | LEARNING SEQUENCERemediationES1  | * 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.*** Using a paper plate the students are to fold plate in half, and cut along the fold. Using a variety of collage material s, and pictures depicting food (from magazines / catalogues etc. chn to turn paper plate into a ‘pizza’. Paste/ glue onto firm coloured A4 cardboard
* Students ‘think, pair, share’ situations when they have had to share something in half with another person.
* Investigation: Provide small amounts of play dough in snap lock bags. Roll yellow play dough into a cylinder shape, red into a ball, and blue flat like a cookie. Students work with a partner, cutting play dough into two equal parts to share. Give students time to explore the different ways they can divide their shape into two equal parts. Students to journal their answers, drawing their findings.
* Assessment: On a proforma showing a selection of shapes, students divide each shape in two equal parts, then colour (using two different coloured pencils)
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| LEARNING SEQUENCEExtension Early S2 | * **Extension:** Provide students with an assortment of objects, such as straws, lengths of string, strips of paper, leaves, paper shapes. Students to draw objects as a whole shape. Students to cut objects into two equal parts. Students to then draw the object as it now appears (in half), alongside original drawing.
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| **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.