**MATHEMATICS STAGE ES1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 3 | STRAND: Measurement and Geometry | **SUB-STRAND:** Mass | **WORKING MATHEMATICALLY:** Mae-3WM Mae-1WM |
| OUTCOMES: Mae-12MG  | **Describes and compares the masses of objects using everyday language** |
| **CONTENT:**  | **Use direct and indirect comparisons to decide which is heavier, and explain their reasoning using everyday language*** Identify the attribute of mass as the amount of matter in an object.
* Use comparative language to describe mass, eg heavier, lighter, heaviest, lightest
* identify an object that is heavier or lighter than another (Communicating)
* record comparisons of mass informally using drawings, numerals and words
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * Children are given sealed clear jars that have been filled to different levels with coloured water, pebbles, macaroni etc.

Each child picks up the jars and makes some predictions regarding heavy and light. |
| WARM UP / DRILL | * Teacher demonstrates hefting with two objects using her/his body to show heavy and light.
 |
| 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 | Classroom objects recording sheet  |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Children use objects from around the room to place in their hands and decide if they are heavy or light. Objects are separated into groups.* Children place an object in each hand and use their body to demonstrate and decide which item is the heaviest and which is the lightest. This is recorded on a simple recording sheet or children can draw their findings.
 | LEARNING SEQUENCEPre Foundation Sills | * Each child is given two jars filled to different levels containing the same objects. They will need to heft both objects simultaneously to conclude which id heavier or lighter.
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| LEARNING SEQUENCEES1 | * Using an equal arm balance, Children place a large object on one side of the equal arm balance and use lighter objects to balance the equal arm balance. Children draw their observations and count how many lighter objects were needed to balance both sides of the equal arm balance.
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| LEARNING SEQUENCEExtension Early S1 | * **Two Mystery Boxes –** Working in pairs,students are given two identical opaque boxes, such as margarine containers, which each hold one item. Student measure the mass of each container using an equal arm balance and informal units and record the mass to work out the difference in mass between the two containers.
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| **EVALUATION & REFLECTION** | * Observation by teacher.
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* 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.