**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 3 | STRAND: Measurement and Geometry | **SUB-STRAND: Volume and Capacity** | **WORKING MATHEMATICALLY:****MAe-1WM** |
| OUTCOMES: MAe-11MG | **Describes and compares the capacities of containers and the volumes of objects or substances using everyday language.**  |
| **CONTENT:**  | **Use direct and indirect comparisons to decide which holds more and explain their reasoning using everyday** language **(ACMMG006)*** Identify the attribute of ‘capacity’ as the amount of liquid a container can hold.
* Fill and empty containers using materials such as water and sand.
* Use comparative language to describe volume and capacity, e.g. has more, has less, will hold more, will hold less, takes up more space.
* Record volume and capacity comparisons informally using drawings, numerals and words.
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| ASSESSMENT FOR LEARNING | * The result of assessment for the previous lessons 3 & 4 in Week 2.
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| WARM UP / DRILL  | * The price is right: Think of a number in a range of say 1 and 30. Write these numbers vertically on the W/B. Students start guessing one at a time. After each guess say higher or lower. The visual representation helps the students understand which numbers are left as you cross out the ones it cannot be. The students who guesses correctly gets to think of a number. You may need to help them with crossing out the numbers and saying higher or lower.
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| TENS ACTIVITY **NEWMAN’S PROBLEM INVESTIGATION** |  |
| QUALITY TEACHING ELEMENTS | **INTELLECTUALQUALITY** | **QUALITY LEARNINGENVIRONMENT** | **SIGNIFICANCE** |
| * Deepknowledge
* Deepunderstanding
* Problematicknowledge
* Higher-orderthinking
* Metalanguage
* Substantivecommunication
 | * 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 | * A range of different size and shape containers.
* Sand/water
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**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTIONMODELLED ACTIVITIES | GUIDED &INDEPENDENT ACTIVITIES |
| * **Revise and reinforce** the concepts covered in Week 2’s lessons eg., larger containers have greater volume and capacity than smaller ones.
* **Demonstrate and discuss** one potential ordering of various containers to students, so they can refer to it if they need to while executing the activity.
 | LEARNING SEQUENCEPre Foundation Skills | * Students will need to have completed and met the objectives of lessons 3 and 4 (Week 2) in order to complete these lessons with an understanding of what volume means in order to order the containers successfully.
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| LEARNING SEQUENCEES1 | **Investigation:*** **The Biggest Drink** - In pairs have children measure and record which drinking tumbler holds the most water. They can then order the tumblers from ‘holds most’ to ‘holds least’.

**Investigation:*** **More Jugs** - Have children measure and record (draw) the capacity of a range of jugs, ordering them from biggest to smallest. If jugs are not available use a range of plastic bottles with different dimensions. Provide eggcups, spoons and cups as informal measuring units.
* Assessment: Have students order the containers and take a photo of what they produced. Ask them why they ordered the containers that way and record what they say.
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| LEARNING SEQUENCEExtension S1 | * Have students find objects around the room and hypothesis about which object would have the biggest capacity.
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| **EVALUATION &REFLECTION** | Where the students engaged? Were the resources appropriate? Did the students achieve the outcomes? What follow up is recommended?  |

* 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.