**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 4 | STRAND:Measurement & Geometry | **SUB-STRAND: Length 1** | **WORKING MATHEMATICALLY:**  MA1-1WM MA1-3WM |
| OUTCOMES: MA1-9MG | | **Measures, records, compares and estimates lengths and distances using uniform informal units, metres and centimetres** | | |
| **CONTENT:** | | **Measure and compare the lengths of pairs of objects using uniform informal units (ACMMG019)**estimate linear dimensions and lengths of curves by referring to the number and type of uniform informal units used and check by measuring  discuss strategies used to estimate lengths, e.g. visualising the repeated unit, using the process 'make, mark and move' (Communicating, Problem Solving) | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | * Students in pairs are given a series of strips of paper to identify and measure which piece is longer, shorter, the same length | | |
| WARM UP / DRILL | | * IWB curved lines game – draw series curved lines on smartboard and students measure with a piece of string to find different lengths. | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | Who do you think will have the longest arm in our class? How can we measure and find out? What will we use to measure? | | |
| 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 | | string, scissors, units: rods, straws, connecting blocks, pencil and paper, chalk | | |

**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** how to measure aligning identical units end to end along a given line without overlapping or leaving gaps * “How could we measure your heads?” * “How could we measure your wrists?” * **Define and Reinforce metalanguage used in the unit** e.g. record that the length is the number and type of units used. Use approximate language to explain parts of units, “about half a unit” * “What advice can you give to someone who is measuring with units?” * I**WB curved lines game** – measure with pieces of string to find different lengths | LEARNING SEQUENCERemediationES1 | * **Plasticine curves:** Students are given different amounts of plasticine and asked to roll it into a snake shape. They make a long straight line then a curved shape. Students can break it into two pieces and curve both and compare which is the shortest and tallest, longest and shortest. |
| LEARNING SEQUENCES1 | **Investigations:**   * **Head bands:** Students work in groups of 4 - Measure around their heads with paper strips and mark correctly without overlap. Measure the length in units (rods, paperclips, blocks, etc.) to find who has the biggest head in the group. Record group measurements and the units used. List the four head measurements in order of size for a group report. * **Wrist bands:** Use string or paper strips to measure width of their wrists. If using paper strips make a tape measure using units to find out who has the widest wrist. Record group measurements and the units used. * **Assessment- Chalk line curves: Students draw a variety of chalk line curves on the ground. Measure the length of each curve using student selected informal units. Record and compare results.** |
| LEARNING SEQUENCEExtensionEarly S2 | * **River lengths:** Students can work in small groups or pairs. They use a string to measure the lengths of rivers on maps using atlases. Record the distances of the rivers in a table and order from shortest to longest. |
| **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.