**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 5 | STRAND: **Measurement & Geometry** | **SUB-STRAND:** **Length 2** | **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:**  | **Compare and order several shapes and objects based on length, using appropriate uniform [informal units](http://syllabus.bos.nsw.edu.au/glossary/mat/informal-unit/?ajax" \t "_blank" \o "Click for more information about 'informal units')*** relate the term 'length' to the longest dimension when referring to an object
* make and use a tape measure calibrated in uniform informal units, eg calibrate a paper strip using footprints as a repeated unit
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * **Desk lengths**: Students measure the lengths and widths of their desks using paddle pop sticks or matchsticks. Estimate and record their findings.
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| WARM UP / DRILL | * Flashcards with length words together and/ or order eg, tall, as tall as, long, longer, longest, small, short, shorter, shortest, end-to-end, side-by-side, no overlaps, no gaps, estimate, measure, length, width
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| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | What is the length of my foot? How can we measure it? Who do you think will have the longest foot? |
| 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 | paddlepop sticks, matchsticks, paperclips, textas, straws, lego bricks, unifix cubes |

**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**

Focus the students’ attention on the need for a common starting point. The teacher should demonstrate how to place two objects lined up at the same starting point, e.g. comparing the length of a shoe and a pencil.* Discuss the length, width, height
* Involve the students in estimating and checking e.g. “Which one do you think is longer, the pencil or scissors?”
* **Define and Reinforce metalanguage used in the unit**: tall, taller, short, shorter, long, longer, wide, wider, thin, thinner, fat, fatter, straight, straighter, about the same, as tall as, width, length
 | LEARNING SEQUENCERemediationES1  | * **Straws in order:** Students are given a number of straws of different lengths. They put them in order from longest to shortest. Straws are used because they will not stand up so students have to decide which end will be the baseline.
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| LEARNING SEQUENCES1 | **Investigations:*** **Object lengths**: In groups of 4, students estimate and measure a variety of objects in units e.g. toy car, pencil, scissors, glue stick, crayon height, and record in order of length.
* **Foot lengths:** In groups of 4, students estimate and measure their foot lengths in units and record in order of length.
* **Carpet Bowls**: In small groups students play carpet bowls. Use a water bottle and cricket balls. The class orders the bowls to how close to the “Jack” or target. Check the distance using string.
* Assessment - BLM identify the length of a variety of objects using informal units, eg, paperclips – longest and shortest Targeting Maths Yr2 Assessment
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| LEARNING SEQUENCEExtension Early S2 | * **How to use a ruler:** Begin the lesson with a whole-class discussion of how to use a ruler to draw and measure lines, which have a length of whole number of centimetres. Students check their rulers to see where the zero is marked, and practise drawing and measuring line by starting at this point.
* Students work in pairs, student A and B. Student A draws five lines for student B, each line to be an exact number of centimetres and a length less than 30 cm. Student B estimates the length of each line, records the estimate, then measures and labels each line. The roles are then reversed. The activity should incorporate both the use of mm and cm and record using abbreviations.
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| **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.