**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: | STRAND: Measurement & Geometry | **SUB-STRAND:** 2D Space 1 | **WORKING MATHEMATICALLY:**  MA1-1WM & MA1-3WM |
| OUTCOMES: MA1-15MG | | **Manipulates, sorts, represents, describes, and explores two-dimensional shapes, including quadrilaterals, pentagons, hexagons and octagons.** | | |
| **CONTENT:** | | **Recognise and classify familiar two-dimensional shapes using obvious features.**   * Identify vertical and horizontal lines in pictures and the environment and use the terms ‘vertical’ and ‘horizontal’ to describe such lines * Relate the terms ‘vertical’ and ‘horizontal’ to ‘portrait’ and ‘landscape page orientation, respectively, when using digital technologies. | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | **Pre-Assessment**  Worksheet – Horizontal And Vertical Lines. | | |
| WARM UP / DRILL | | **Line Hunt:** Students look for all types of lines inside the classroom.  Encourage discussion as the students are looking for lines.  Students describe and group the lines that they find. | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | Steve has ten classroom desks in his room. How man horizontal and vertical lines would he have in total? | | |
| 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 | | Various pictures depicting horizontal and vertical lines and magazines, | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | | |
| * **Explicitly communicate lesson outcomes and expectations of work quality**. * **Define and Reinforce metalanguage used in the unit** e.g. straight line, curved line, vertical, horizontal, orientation, portrait (orientation) and landscape (orientation) * **Define and model horizontal and vertical lines.** * **Relate the terms ‘vertical’ and ‘horizontal’ to ‘portrait’** and ‘landscape’ page orientation, when using digital technologies. | LEARNING SEQUENCERemediationES1 | * Students identify and draw straight and curved lines. | |
| LEARNING SEQUENCES1 | * Display a variety of pictures to the class. Ask students to identify the horizontal and vertical lines within each picture. * Students identify horizontal and vertical lines in the classroom and within the school grounds, e.g. flag pole, down pipes, roof beams, gutters, table legs. Students discuss and record their observations. * Students make a line drawing of their choice with all horizontal lines black, all vertical lines red and all other lines blue using digital technologies. At this time the terms portrait and landscape should be explicitly taught and children directed to complete their drawings using both orientations. * In groups, students collect pictures depicting objects with either horizontal or vertical lines to create horizontal and vertical collages.   **Investigation:** Students photograph objects in the classroom that have horizontal and vertical lines to make a collage which can be used as a class display.  **Assessment:** Re-do worksheet – Horizontal And Vertical Lines. | |
| LEARNING SEQUENCEExtensionLate S1 | * Students identify horizontal and vertical lines in regular 2D shapes. | |
| **EVALUATION & REFLECTION** | Student Engagement:  Resources: | Achievement of Outcomes:  Follow Up: |