**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 6 | STRAND: Measurement and Geometry | **SUB-STRAND:** **Time 2** | **WORKING MATHEMATICALLY:** **MA1-1WM, MA1-2WM, MA1-3WM** |
| OUTCOMES: MA1-13MG | **Describes, compares and orders durations of events, and reads half- and quarter-hour time** |
| **CONTENT:**  | **Describe duration using months, weeks, days and hours*** Estimate and measure the duration of an event using a repeated informal unit.
* Compare and order the duration of events measured using a repeated informal unit.
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * Make a class table showing the duration of different events e.g. Things that take 1 minute/ things that are about 1 minute and things that take more than 1 minute.
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| WARM UP / DRILL | * O’clock, I/2 past and digital clock flashcard drill.
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| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | It takes me 30 seconds to tie up my shoelaces. How long would it take for me to tie my shoe laces and my friends shoe laces? |
| 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 | Time flashcards, relevant worksheets, bean seeds, plastic cups, cotton wool, tissue paper or soil, sand timers, stopwatches, informal units of measure e.g. centicubes, unifix cubes, small whiteboards and markers. |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Review and Teach – Using a stopwatch on the Interactive Whiteboard (IWB), estimate the number of times a student could do given challenges in 1 minute e.g. No. of star jumps, making a unifix cube tower.Record results. *Try the same challenges with different students and compare the results.*Gather the results for at least 5 students then use the data to graph the results and discuss the similarities and / or differences. Why do the students’ results vary? * **School Activity Times** – Discuss longer time periods during school hours e.g. things that take 5-10 minutes, 30 minutes, about 1 hour and more than 1 hour. As a class, find examples of each time period and list in a table.
* **Growing Beans** – Provide each student with a bean seed and cup. Place the seed into the cup with soil/ cotton wool or tissue paper. Ensure the seed is placed near the side of the cup. Add water and place near a light source. After approximately 1 week, measure the growth of the seeds using an informal unit of measure. Each student then records their results on a table. Repeat this for several weeks. Discuss results each week. Whose seed grew the tallest in the time frame given? How tall do you think they will grow in another week or no. of weeks?
 | LEARNING SEQUENCERemediationES1  | * Sequence events in time.
* Use terms such as ‘daytime’, ‘night-time’, ‘yesterday’, ‘today’, ‘tomorrow’, ‘before’, ‘after’, ‘next’, ‘morning’ and ‘afternoon’ when describing events.
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| LEARNING SEQUENCES1 | * In pairs students estimate, then measure the amount of ‘claps’ it takes to complete a given task e.g. write their name 5 times. Record results on a table.
* In pairs students complete ‘1 minute challenges’. Use a sand timer and/or a stopwatch to keep time. Record, and then discuss their results with each other.
* **Investigation:** Record the ‘start’ time and ‘end’ time of at least two favourite TV shows on an analogue and/or digital clock. What is the duration of each show? Which show is longest/ shortest?
* **Assessment** – Students perform various tasks in 1 minute. Have another student use a sand timer and/or stopwatch to time them. Record results on the sheet provided. Cut out each task and place in order from shortest duration to longest duration.
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| LEARNING SEQUENCEExtension Early S2 | * Calculate the duration of given TV programs then order them according from shortest running program to longest running program.
* Convert the duration of each program from ‘hours and minutes’ to just ‘minutes’ e.g. 9:30-10:35 = 1 hour and 5 mins = 65 mins.
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| **EVALUATION & REFLECTION** | * Can students estimate then measure the duration of given events using informal units?
* Can students compare and order events based on duration?
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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.