**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 and name shapes embedded in pictures, designs and the environment, e.g. in Aboriginal art
* Use computer drawing tools to outline shapes embedded in a digital picture or design
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | Have students draw as many shapes as they know in their maths journal or instruct them to draw specific shapes as communicated by the teacher.  |
| WARM UP / DRILL |  |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  |  |
| 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 | Metalanguage signage and environmental print, student activity [www.mathgametime.com](http://www.mathgametime.com), maths journals, computers, paper, paints, crayons, watercolours, pencils and textas |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Explicitly communicate lesson outcomes and work quality.* **Define and reinforce metalanguage** used in the unit e.g. shapes, rectangle, square, circle, triangle, same shape, different, order, size, smallest, largest, count, curved, straight
* **Shapes Video – YouTube**

Have students view the YouTube clip *Shapes for Children with Choo-Choo Train –* [*https://www.youtube.com/watch?v=8uIjdI0qbi8*](https://www.youtube.com/watch?v=8uIjdI0qbi8)After watching the clip, discuss the various shapes presented with the class. Talk about the properties of given shapes such as the number of sides, corners, angles, curved sides, straight sides etc.  | LEARNING SEQUENCERemediationES1 | * **Finding Shapes in a Picture:** Have students complete the activity sheet located at the website below.

<http://www.mathgametime.com/worksheets/finding-shapes-in-a-picture-math-worksheet> |
| LEARNING SEQUENCES1 | * **Shape Pictures:** Have students create simple shape pictures. Under each picture, have the students describe what they have drawn by recording the shapes and the number of each shape used. For example*, I drew a boat with two triangles, one rectangle and one circle for the sun.*
* **Assessment: Digital Drawing:** Have students use the online Crayola colouring application to draw and label a variety of 2D shapes such as squares, rectangles, triangles, circles, pentagons, hexagons and octagons.

<http://www2.crayola.com/coloring_application/>* **Indigenous Art:** Search Google Images for different types of indigenous artworks that incorporate a variety of simple 2D shapes. Display these to the students and have them recreate indigenous artworks that use simple 2D shapes.
* **Investigation:**
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| LEARNING SEQUENCEExtension Early S2 | * **Digital Drawing:** Using the Crayola application, have students draw different types of quadrilaterals such as squares, rectangles, diamonds, trapeziums, rhombus etc.
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| **EVALUATION & REFLECTION** | **Student Engagement:****Resources:** | **Achievement of Outcomes:****Follow-up:** |