**MATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 3 | STRAND: Measurement and Geometry | **SUB-STRAND:** Angles 1 | **WORKING MATHEMATICALLY:**  Ma2-1WM |
| OUTCOMES: MA2-16MG | | **Identifies, describes, compares and classifies angles** | | |
| **CONTENT:** | | **Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)**   * Identify perpendicular lines in pictures, designs and the environment. CT * Use the term right angle to describe the angle formed when perpendicular lines meet. * describe examples of right angles in the environment (Communicating, Problem Solving) * identify right angles in two-dimensional shapes and three dimensional objects (Communicating) | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | |  | | |
| WARM UP / DRILL | |  | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | | * Draw a right angle that you can find in the classroom | | |
| 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 | | 1)[*http://www.mathsisfun.com/perpendicular-parallel.html*](http://www.mathsisfun.com/perpendicular-parallel.html)  2) *Teaching about angles: Stage 2*  [*http://technologyinmaths.wikispaces.com/file/view/teaching+about+angles+stage+2.pdf*](http://technologyinmaths.wikispaces.com/file/view/teaching+about+angles+stage+2.pdf)  3) <http://www.primaryresources.co.uk/maths/mathsE7.htm>  4) Things I wish I knew earlier about teaching maths – Teaching about angles – Stage 2  <http://marion2407.blogspot.com.au/2011/03/teaching-about-angles-stage-2.html> | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| * Revise that an angle is formed when two lines meet, discussing classroom examples * Define what perpendicular lines are. (Resource 1). Students informed that right angle is formed when two perpendicular lines meet. * Students make an ***angle eater***by:   \* Folding a circle of paper in half.  \* Fold the paper again into four quarters  \* Cut out one of the quarters and discard  \* Decorate the *angle eater* on both sides (Eg as fish, monster etc) Students use circle of paper with the missing quarter as the *angle eater* to locate angles that fit exactly into the gap, therefore locating right angles. | LEARNING SEQUENCERemediationS1 or Early S2 |  |
| LEARNING SEQUENCES2 | * Students locate right angles in the playground and record using cameras / ipads. After viewing the right angles located, discuss why there are so many right angles used in buildings. * Students complete worksheet on right angles by Matthew Cameron   <http://www.primaryresources.co.uk/maths/mathsE7.htm> |
| LEARNING SEQUENCEExtensionLate S2 or Early S3 | * Students complete Estimating Angles interactive game     <http://nrich.maths.org/1235> |
| **EVALUATION & REFLECTION** | **Student Engagement: Achievement of Outcomes:**  **Resources: Follow Up:** |

* 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.