**Stage 4 - Mathematics**

***Edgeware School***

**Engage**

**Achieve**

**Develop**

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|   | **Teaching and Learning Program** |
| Title/Type of Unit: **Multiplication tables**Program Risk Level: **Low** | Duration: **6 hours**By Greg |
| **Syllabus Outcomes****Stage 4**  | *A student:***MA4 – 1WM** communicates and connects mathematical ideas using appropriate terminology, diagrams and symbols**MA4 – 2WM** applies appropriate mathematical techniques to solve problems**MA4 – 3WM** recognises and explains mathematical relationships using reasoning**MA4 – 4NA** compares, orders and calculates with integers, applying a range of strategies to aid computation |
| **Connectedness****Why does this learning matter?** | **Students learn to:*** Multiply numbers
* Group numbers
* Compute and solve equations
 | **Students learn about:*** Multiplication
* Mathematical symbols
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| **Background and Key Ideas** | A unit of work on the multiplication tables from 0 to 12. Key ideas are* To engage students in learning about and recalling the multiplication table from 0 to 12.
* Identify patterns in multiplication tables
* Participate in regular assessment and record progress
* Optional: students may recite the multiplication table of specific numbers as a speaking activity
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| **Literacy Continuum** | Reading Texts | Comprehension | Vocabulary Knowledge | Aspects of Writing | Aspects of Speaking | Phonics | Phonemic Awareness | Concepts About Print |
| **Clusters**: 13-16**Activities linked to program to increase learning:**Reading and comprehending equationsIdentifying mathematical symbols |
| **Numeracy Continuum** | Counting Sequences | Counting as Problem Solving | Pattern and Number Structure | Place Value | Multiplication and Division | Fraction Units | Length, Area and Volume |
| Identifying and Recording numbersSolving equationsGrouping numbersIdentifying patternsMultiplying numbers |
| **Intellectual Quality** | **Quality Learning Environment** | **Significance** |
| * IQ1 Deep Knowledge
* IQ2 Deep Understanding
* IQ3 Problematic Knowledge
* IQ4 Higher-order Thinking
* IQ5 Metalanguage
* IQ6 Substantive Communication
 | * QLE1 Explicit Quality Criteria
* QE2 Engagement
* QE3 High Expectations
* QE4 Social Support
* QE5 Students’ Self-regulation
* QE6 Student Direction
 | * S1 Background Knowledge
* S2 Cultural Knowledge
* S3 Knowledge Integration
* S4 Inclusively
* S5 Connectedness
* S6 Narrative
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| **Teaching and Learning Lesson Overview** |
| **The Elements of Learning & Achievement**F:\Mock ups\Square elements\Numeracy.jpgE:\Final V1\Final sq NO border\Sq Technology no bdr.jpg | 1. Introductory lesson

 Use base ten block, counters or any other appropriate materials to demonstrate grouping. For example have 12 blocks on a table and ask a student to make 2 equal groups and ask how many in each group? (6). Then ask the student to make groups with 4 blocks in each group, ask how many groups are there? (3). This can continue with different amounts of blocks and grouping until staff feel the student is ready to progress to the booklet.2. Lessons The times table booklet is broken up into 13 sections. Each section is based on a multiplication table of a specific number from 0 to 13. Each section can be delivered as 1 to 3 lessons. Each lesson may vary from 10 minutes to 30 minutes. At the end of each section is an assessment task. There are further assessment tasks through the booklet. Students are able to record their progress from the assessment tasks. *Optional:* Student may recite the multiplication table as part of a speaking activity. *Technology:* Students can access maths multiplication table games from a variety of websites and software packages. Some websites have been included below.2. Websites<http://www.mathsonline.com.au/games/times_tables><http://www.coolmath-games.com/1-number-games><http://www.maths-games.org/times-tables-games.html>[http://www.bbc.co.uk/skillswise/game/ma13tabl-game tables-grid-find](http://www.bbc.co.uk/skillswise/game/ma13tabl-game%20tables-grid-find) <http://www.topmarks.co.uk/maths-games/7-11-years/times-tables> | **Aboriginal 8 Ways of Learning***The following ways of learning are incorporated throughout the program through pedagogical practices*2_maps.jpgLearning Maps4_symbol.jpgSymbols & Images7_deconstruct.jpgDeconstruct/ Reconstruct |

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| **Special Needs Adjustments** | **School to Work** |
| Most work has been adjusted. Further adjustment of work can be made as needed.SLSO support. | Multiplication skill required in many industriesMultiplication skill required for living skills |
| **Assessments** |
| Weekly tests.Quarterly tests from 0-3, 4-6, 7-9, 10-12.End of unit test based on all multiplication tables. |
| **Roles and Responsibilities** |
| Teacher | SLSO | Student |
| Demonstrate and provide instruction on introductory lesson and activityAssist and supervise studentsPrepare for each lesson | Assist the studentsAssist the teacherPrepare resources | Participate appropriately in lessonsComplete tasksRecord progress from assessment tasks |
| **Risk Assessment**  |
| **Resources** | **Safety Strategies** | **Identified Hazards** | **Control Strategies** |
| Blocks, counters or other counting materialX table bookletWriting toolsComputer | Supervise student | Counting objects (blocks, counters or other)Writing tools | Safe counting materialsTeacher and SLSO supervision of student |

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| **Teacher Evaluation****Comments / Variations** |
| Guiding QuestionsWhat worked well?What needed to be changed?What do I think the students gained from this lesson?How well did this unit match the Elements of Learning and Achievement?What did I learn?How will I use this experience to extend my practice in the future?  |
| **Date Commenced**:  | **Date Finished**:  |
| **Teachers Signature**: | **Assistant Principals Signature**: |