Course Description:
This unit incorporates the Australian Curriculum Mathematic content strands of **Number and Algebra, Statistics and Probability and Measurement and Geometry**. The main focus of this unit is algebra, angles, triangles and quadrilaterals.

Course Outcomes:
By the end of this unit you should be able to:
- Create an algebraic expression
- Solve algebra by substitution
- Apply the commutative and associative laws when solving equations
- Simplify, expand and factorise algebraic expressions
- Plot and identify co-ordinates on the Cartesian plane
- Plot linear relationships on the Cartesian plane
- Solve linear equations using algebraic and graphical techniques
- Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal
- Classify triangles
- Develop the conditions for congruence of triangles

Course Organisation:
Student’s activities will include:
- Student based investigations to discover rules, laws and concepts
- Teacher directed instruction and explanation combined with student practise of a new skill
- Group and partner work to consolidate learning
- Using technologies to investigate, solve and present problems and skills

Course Timeline:

<table>
<thead>
<tr>
<th>Wk</th>
<th>Activity</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1-4 | Number and Place Value- Patterns and Algebra | • In class worksheets  
• Homework pieces  
• Test, end of week 4 |
| 5   | Measurement and Geometry- Geometric reasoning | • Angles assignment  
• Selected class work |
| 6-7 | Number and Place Value- Linear and Non-Linear Relationships | • In class worksheet  
• Investigation  
• Homework pieces  
• Test end of week 7 |
| 8-9 | Measurement and Geometry | • Class assigned work  
• Open book Test end of week 9 |
| 10  | Country Week | |
Course Vocabulary:
- Term
- Variable
- Pro-numeral
- Expression
- Formula
- Substitution
- Commutative
- Associative
- Algebraic equation
- Unknown
- Cartesian plane
- Co-ordinates
- Plot
- Linear
- Relationship
- Rule
- Slope
- Intercept
- Co-interior angle
- Corresponding angle
- Alternate angles
- Degrees
- Scalene
- Isosceles
- Equilateral
- Pythagoras
- congruent

- Assessment Outline -

Course Assessment:

<table>
<thead>
<tr>
<th>Wk</th>
<th>Assessment type</th>
<th>Weighting</th>
<th>Marks achieved</th>
<th>Your Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Test</td>
<td>20%*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Test</td>
<td>20%*</td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>Test</td>
<td>20%*</td>
<td></td>
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</tr>
<tr>
<td>1-9</td>
<td>Selected classroom and home work**</td>
<td>20%*</td>
<td></td>
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</tr>
<tr>
<td>1-9</td>
<td>Friday “Weekly Revision Quiz”</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-9</td>
<td>Classroom behaviour, attitude and contributions</td>
<td>10%*</td>
<td></td>
<td></td>
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</tbody>
</table>

*specific marks to be advised and are subject to change

** Students may not be told which piece of classroom work is to be collecting for marking until the activity is complete.

Specific Equipment required for each lesson:
- File/book to write in
- Pens, ruler
- Scientific calculator