Mathematics Semester Outline

Year 9 Semester 1 2013
Teacher: Phillip Lewington, David Green

Topics
In Mathematics this semester your child will study the following topics: Pythagoras and Trigonometry, Units of Measurement, Geometric Reasoning, Chance and Data Representation. They will work towards the achievements outlined in the Australian Curriculum and will focus on the application of Mathematics in their everyday life.

Student equipment requirements: Scientific calculator, 2 x A4 exercise book, blue and red pens, pencil, ruler, eraser, maths set (including a compass) and colour pencils.

Learning Outcomes
After studying the work in these topics, your child should be able to:

• Use Pythagoras’ theorem to solve everyday problems.
• Solve problems involving the area and volume of prisms, cylinders and composite solids
• Solve problems involving the transformation of shapes
• Represent probabilities in different forms and calculate outcomes of various situations
• Collect and interpret data
• Use mathematical language and skills to solve problems

Assessment Item | Weighting | Due Date
--- | --- | ---
Assignments | 30% | Week 7, Week 16
Tests | 40% | Week 8, Week 17
In-class assessment | 20% | Ongoing
Homework/Mathletics | 10% | Ongoing

Year 9 Achievement Standard
By the end of Year 9, students solve problems involving simple interest. They interpret ratio and scale factors in similar figures. Students explain similarity of triangles. They recognise the connections between similarity and the trigonometric ratios. Students compare techniques for collecting data in primary and secondary sources. They make sense of the position of the mean and median in skewed, symmetric and bi-modal displays to describe and interpret data. Students apply the index laws to numbers and express numbers in scientific notation. They expand binomial expressions. They find the distance between two points on the Cartesian plane and the gradient and midpoint of a line segment. They sketch linear and non-linear relations. Students calculate areas of shapes and the volume and surface area of right prisms and cylinders. They use Pythagoras’ Theorem and trigonometry to find unknown sides of right-angled triangles. Students calculate relative frequencies to estimate probabilities, list outcomes for two-step experiments and assign probabilities for those outcomes. They construct histograms and back-to-back stem-and-leaf plots.
Late policy

Assessment items submitted late will incur a penalty of 5% of the total marks for the item for each day late. Students seeking extensions of due dates should see their teacher before due date.

Homework and Assignments

Wanniassa School regards h/w as an essential part of learning. Completion of homework tasks by the due date is necessary to ensure a satisfactory grade.

Plagiarism

Plagiarism is a form of cheating. Failure to acknowledge sources may result in work not being marked.

Wanniassa School Values

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<tr>
<th>VALUES</th>
<th>Responsibility</th>
<th>Respect</th>
<th>Hard Work</th>
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<tbody>
<tr>
<td></td>
<td>Taking charge of our own actions and caring about what is important</td>
<td>Being aware of other people, their property and their learning</td>
<td>Always trying our best and being involved in learning</td>
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<tr>
<th>BEHAVIOUR</th>
<th>I am always quiet when someone else is talking</th>
<th>I treat others the way I want to be treated</th>
<th>I try my best</th>
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<tr>
<td></td>
<td>I take responsibility for my own learning and behaviour</td>
<td>I respect all students and teachers</td>
<td>I try hard in all my classes</td>
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<td>I ask questions when I don’t understand</td>
<td>I don’t talk about people behind their back</td>
<td>I participate in all group activities</td>
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<td>I am honest</td>
<td>I listen carefully when others speak</td>
<td>I meet my deadlines</td>
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<td>I care about people, their property and learning</td>
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<td>I have a positive attitude towards work</td>
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<td>I accept everyone for who they are</td>
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<td>I am nice to people</td>
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I have read this unit outline and have noted the requirements for the course.

Student’s Signature: ................................................................. Date: ........................................

Parent/Guardian’s Signature: .......................................................... Date: ........................................

Parent/Guardian’s Email address: ..........................................................