

YEAR 7&8 MATHEMATICS

TERM 2

- Unit Outline -



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 investigating fractions, decimals and percentages, data representation and interpretation and volumes of rectangular and triangular prisms.

Course Outcomes:

By the end of this unit you should be able to:

- Round a decimal number to one or two places
- Identify and use the connection between fractions, decimals and percentages
- Solve problems involving percentage increase and decrease
- Find the percentage of a quantity
- Understand and recognise an irrational number
- Understand and recognise terminating and recurring decimals
- Represent data in 2-way tables, Venn diagrams and Stem and Leaf plots
- Find the volume of a rectangular prism and triangular prism
- Solve problems involving finding the volume of the above 3D shapes

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:

Wk	Activity	Assessment
1-3	Statistics and Probability <ul style="list-style-type: none">• Mean, mode, median, range and outliers• stem and leaf and dot plots• 2-way tables and Venn Diagrams	<ul style="list-style-type: none">• In class worksheets• Probability assignment• Open book Test, week 3
4-8	Number and Place Value- Real Numbers <ul style="list-style-type: none">• Rounding of decimals• Investigate terminating and recurring decimals and irrational numbers such as π Investigate irrational numbers• Connect fractions, decimals and percentages• Investigating Percentage of a quantity and solve problems involving percentage increase and decrease• Solve problems using rates and ratios	<ul style="list-style-type: none">• In class worksheet• Fractions/decimals/percentages investigation• End of Semester 1 Test week 6• End of unit Test week 8
9-10	Measurement and Geometry <ul style="list-style-type: none">• Investigate and develop the formula for volume of triangular and <i>rectangular prisms</i>• Find the volume for these prisms	<p>Class assigned work</p> <p>Open book Test week 10</p>

- Solve problems relating to the volume of prisms

Course Vocabulary:

- Decimal
- Round
- Percentage
- Fraction
- Percentage increase
- Percentage decrease
- Quantity
- Recurring decimal
- Terminating decimal
- Rate
- Ratio
- Volume
- 3D
- Triangular prism
- Rectangular prism
- Length
- Width
- Height
- cm^3, m^3
- surface area
- formula
- Chance
- Probability
- Event
- Sample space
- Venn diagram
- 2-way table
- Stem and Leaf plot
- Probability "given"
- Probability involving and, not, or
- At least
- Inclusive
- Exclusive
- mean
- mode
- median
- range
- outlier

- Assessment Outline -

Course Assessment:

Wk	Assessment type	Weighting	Marks achieved	Your Total
3	Test	10%*		
6	Test	30%*		
8	Test	10%		
10	Test	15%*		
1-9	Selected classroom work**	20%*		
1-9	Classroom behaviour, attitude and contributions	15%*		

**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