



WAGIN DISTRICT HIGH SCHOOL SEMESTER OUTLINE

Year 8 Semester 1 2017 Mathematics

COURSE OUTLINE

Mathematics this semester will cover mathematical topics set out by the Australian Curriculum. The semester will cover Number and Algebra, Measurement and Geometry as well as Statistics and Probability. These topics will involve a 3 or 4 week block of work on a topic relevant to the outcomes.

COURSE OUTCOMES

The topics covered this semester will meet the Australian curriculum standards in the following topics.

Number and Algebra
Number and place value
Use index notation with numbers to establish the index laws with positive integral indices and the zero index
Carry out the four operations with integers, using efficient mental and written strategies and appropriate digital technologies
Real numbers
Investigate terminating and recurring decimals
Investigate the concept of irrational numbers, including π
Patterns and algebra
Extend and apply the distributive law to the expansion of algebraic expressions
Factorise algebraic expressions by identifying numerical factors
Simplify algebraic expressions involving the four operations
Linear and non-linear relationships
Plot linear relationships on the Cartesian plane with and without the use of digital technologies

Measurement and Geometry
Geometric reasoning
Define congruence of plane shapes using transformations
Develop the conditions for congruence of triangles
Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning
Statistics and Probability
Data representation and interpretation
Explore the practicalities and implications of obtaining representative data using a variety of investigative processes
Explore the variation of means and proportions in representative data
Investigate the effect of individual data values, including outliers, on the mean and median

TIME LINE

This time line is a guide to the topics covered in each block

Term 1	Number	Investigation
Week 1	Whole number addition, subtraction, multiplication and division	
Week 2	Bimdas and integers	
Week 3	Scientific Notation Negative numbers	
Week 4	Addition, subtraction, multiplication and division of positive and negative numbers	
Week 5	Bimdas involving intergers	Test
Week 6	Length and perimeter Circumference of a circle	Investigation
Week 7	Area of 2 D shapes	
Week 8	Area of sectors and composite shapes. Surface area of prisms	
Week 9	Volume and capacity of prisms and cylinders	Investigation
Week 10	Time and Pythagorus	Test

Term 2	Angles at a point	Investigation
Week 1	Parallel Lines	
Week 2	Triangles unique and common	
Week 3	Quadrilaterals Polygons	
Week 4	Solids and Euler's rule	Test
Week 5	The number plane and graphing	
Week 6	Linear rules from tables and gradients	Investigation
Week 7	Linear equations from x- intercept and applications of graphs	
Week 8	Non linear graphs	Test
Week 9	Transformations and congruency Reflection, rotation	Investigation
Week 10	Congruent figures	Test

TASKS

Each section of work may involve

- End of topic Test
- Assignment
- Project
- Homework
- Revision Exercises

ASSESSMENT BREAKDOWN

CHAPTER TESTS (6)	55%
ASSIGNMENTS/PROJECTS (7)	35%
HOMEWORK /REVISION EXERCISES	10%