WAGIN DISTRICT HIGH SCHOOL SEMESTER OUTLINE

Year 7 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 and Measurement and Geometry. 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
Investigate index notation and represent whole numbers as products of powers of prime numbers
Investigate and use square roots of perfect square numbers
Apply the associative, commutative and distributive laws to aid mental and written computation
Compare, order, add and subtract integers
Real numbers
Multiply and divide fractions and decimals using efficient written strategies and digital technologies
Round decimals to a specified number of decimal places
Connect fractions, decimals and percentages and carry out simple conversions
Patterns and algebra
Introduce the concept of variables as a way of representing numbers using letters
Create algebraic expressions and evaluate them by substituting a given value for each variable
Extend and apply the laws and properties of arithmetic to algebraic terms and expressions

Explore the use of brackets and order of operations to write number sentences
Linear and non-linear relationships
Solve simple linear equations
Measurement and Geometry
Location and transformation
Describe translations, reflections in an axis, and rotations of multiples of 90° on the Cartesian plane using coordinates. Identify line and rotational symmetries
Geometric reasoning
Identify corresponding, alternate and co-interior angles when two parallel straight lines are crossed by a transversal
Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning
Classify triangles according to their side and angle properties and describe quadrilaterals
Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral
Using units of measurement
Interpret and use timetables
Solve problems involving duration
Statistics and Probability
Data representation and interpretation
Identify and investigate issues involving continuous or large count data collected from primary and secondary sources
Construct and compare a range of data displays including stem-and-leaf plots and dot plots
Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data
Describe and interpret data displays and the relationship between the median and mean

TASKS

Each section of work may involve

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

TIME LINE

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

Term 1 Week 1&2	**Whole Number** **Number systems** **Place value, Bimdas**	**BIMDAS** **Investigation**
Week 3	**Whole Number** **Add/Subtraction**	
Week 4	**Whole Number** **Multiplication/Division**	**Test**
Week 5	**Decimal Rounding** **Addition/Subtraction**	
Week 6	**Decimal** **Multiplication and multiplication by powers of 10**	**Investigation**
Week 7	**Decimal Division and division by powers of 10**	
Week 8	**Decimal and fractions**	
Week 9	**Decimals and Percentage**	**Investigation**
Week 10	**Fractions and Percentage**	**Test**

Term 2 **Week 1**	**Geometry** **Points, lines and angles**	
Week 2	**Measuring and classifying angles**	**Investigation**
Week 3	**Parallel lines and angles**	
Week 4	**Circles and construction**	**Test**
Week 5	**Units of Measure** **Perimeter**	**Investigation**
Week 6	**Area of rectangles, triangles and parallelograms**	
Week 7	**Area of composite shapes** **Volume and capacity of rectangular prisms.**	**Test**
Week 8	**Negative numbers** **Integers. Addition and subtraction of positive integers**	**Investigation**
Week 9	**Addition and subtraction of negative integers**	
Week 10	**Multiplication and division of integers** **Order of operations**	**Test**

ASSESSMENT BREAKDOWN

CHAPTER TESTS (5)	**55%**
ASSIGNMENTS/INVESTIGATION (6)	**35%**
HOMEWORK /REVISION EXERCISES	**10%**