



8th Grade Mathematics

Mr Norcross

Willows Preparatory School 2018-19

Subject Aims

- Develop confidence, perseverance and independence in Mathematical thinking and problem solving.
- Communicate confidently and clearly in a variety of contexts.
- Appreciate the contribution of Mathematics in other areas.
- Reflect critically and constructively on your work and the work of others.
- Nurture the skills and knowledge required for students to take their studies in Mathematics beyond the MYP

Keys to Class

- **Haese Mathematics** – Our textbook is from the Haese Mathematics series, 7th grade use book 8 MYP 3
- **OneNote** – Everything flows through OneNote you can check on starters, homework, study guides, reflections and resources.
- **Homework** – 3 times a week and approximately 20mins each time, returned in a timely manner, will likely be used to inform classroom practice.
- **Discussion** – I really enjoy further exposition, discussion and clarification in class, I encourage the students to talk about Maths as much as possible!
- **Equipment** – Bringing your own geometry kit is a great start, preferably students will also have their own Scientific Calculator or Graphics Calculator.

I.B. Grading Criteria

Objective A: Knowing and Understanding	Do we have access to a selection methods, processes and techniques? Can we apply them to challenging and unfamiliar problems?
Objective B: Investigating Patterns	Can we generalize patterns and investigate their properties?
Objective C: Communicating	Can we link together the different forms of Maths to produce accurate, coherent solutions?
Objective D: Apply Mathematics in Context	How do we identify what is relevant? Can we justify our answers and reflect on the accuracy of our solutions?

Content Brief

Trimester 1	Trimester 2	Trimester 3
Algebraic Expressions: Indices, Surds, Quadratic Factorizing, Algebraic Fractions Quadratics: Forms, Factorize, Solve, Properties of Functions and Graphs, The Discriminant, Non-Linear Simultaneous Equations Volumes of Solids: 3D Forms, Cubic Functions and Graphs by Inspection, Composite Volumes	Functions and Graphs: Direct and Inverse Proportion, Rational Functions, Exponential Functions, Growth and Decay, Related Functions and Transformations Trigonometry: Triangle Geometry, Circle Theorems, Non-Right-Angled Triangles, Functions and Graphs, Related Functions and Transformations	Vectors: Similarity in 2D and 3D forms, Congruency, Transformations, Vector Arithmetic and Pathways Stats and Probability: Measures of Center and Spread, Probability of Combined Events, Dependence and Independence, Sample Space, Expectation