



Curriculum Night: 8th Grade Mathematics Mr Norcross

Willows Preparatory School 2017-18

I.B. Learning Aims & Goals

- 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.

I.B. Learning Objectives

IB learning objectives are determined across four objective criterion:

- Objective A: Knowing and Understanding
- Objective B: Investigating Patterns
- Objective C: Communicating
- Objective D: Apply Mathematics in Context

I.B. Grading Criteria

Students will receive a local grade which is percentage based and letter referenced.

Additionally all IB objective criterion will be formally assessed twice throughout the year. These will be informally assessed on a continual basis. The success in the objective criterion is measured on a 0-8 scale. Limited competency is graded 1-2, adequate 3-4, substantial 5-6 and excellent 7-8. Further detail, specific to Mathematics, regarding the grade descriptors is available in OneNote

A cumulative score is calculated for the year using the criterion scores and this is referenced on a scale of 1-7.



The following is an outline of the content for the 8th Grade Mathematics Course. Number work will be studied intermittently throughout the year as an application that supports the academic Mathematics.

Number work includes integers and other number sets including irrational numbers, exponents, special number sets, fractions, decimals, percentages, ratio, rounding and estimating, scientific notation and arithmetic.

Trimester 1

Indices, Surds, Quadratic Factorizing, Algebraic Fractions, Forms, Factorize, Solve, Properties of Functions and Graphs, The Discriminant, Non-Linear Simultaneous Equations, 3D Forms, Cubic Functions and Graphs by Inspection, Composite Volumes

Trimester 2

Direct and Inverse Proportion, Rational Functions, Exponential Functions, Growth and Decay, Related Functions and Transformations, Triangle Geometry, Circle Theorems, Non-Right-Angled Triangles, Functions and Graphs, Related Functions and Transformations

Trimester 3

Similarity in 2D and 3D forms, Congruency, Transformations, Vector Arithmetic and Pathways, Measures of Center and Spread, Probability of Combined Events, Dependence and Independence, Sample Space, Expectation