MATHEMATICS

Secondary I & II

First and foremost, the math department at Westwood High School LOVES mathematics. We are excited to be teaching a subject that we truly enjoy and hope that this enthusiasm rubs off on our students. We want our students to look forward to coming to math class and be actively involved in their learning of mathematics!

We all understand the Quebec Reform very well and love challenging our students with what the program has to offer. We believe strongly in the basics and help build that foundation for the students so that they can build strategies in solving more challenging situations. We are always available for help and believe that with the aide of the student's home, as a team, we can achieve student success.

WHAT DO WE COVER IN CYCLE 1 OF MATHEMATICS AT WESTWOOD?

The curriculum covered is based on the Quebec Education Program (QEP). The following main curriculum headings are Arithmetic, Geometry, Algebra, Statistics and Probability. They can be broken down further to include some of the following topics (among others):

Arithmetic

Decimals, fractions, proportions, operations sense, different ways of representing numbers.

Geometry

Area and perimeter of polygons and circles, surface area, transformations and constructions , angles and measurement.

Algebra

Understanding algebraic expressions, constructing and evaluating algebraic expressions and solving algebraic equations.

Statistics

Constructing and analyzing tables and graphs, using (forming) statistical reports.

Probability

Studying Random experiments, calculating probability of events and determining all possible possibilities.

EVALUATION

The mathematics program is focused on getting students to solve problems, reason, establish connections and communicate. The program is centered on the development of these competencies which are similar to those in the elementary curriculum:

- Solves a situational problem
- Uses mathematical reasoning

We as teachers try and incorporate both competencies in our daily classroom routines.

Solving a situational problem

The solving of situational problems is a central part of both mathematical and everyday activities and is examined from two perspectives. On the one hand, it is viewed as a process, which is embodied in the competency *Solves a situational problem*. On the other hand, problem solving is also an instructional tool that can be used in most mathematical learning processes. Moreover, it is of particular importance because the study of mathematical concepts requires the application of logical reasoning to situational problems.

Students will be able to:

- Identify the important information from a problem
- Construct an answer based on the information given
- Perform the proper calculations
- Explain and organize their solutions

Uses mathematical reasoning

The competency *Uses mathematical reasoning* is the cornerstone of all mathematical activity. In learning situations (situations involving applications, situational problems or other activities), students who use mathematical reasoning must organize their thinking by attempting to understand a body of knowledge and the interrelationships between these items of knowledge.

Students will be able to

- Show that they can identify the useful information
- Perform the correct calculations
- Organize themselves in an orderly fashion
- Work neat and clearly
- Justify and explain their work

Competency 1	Solving a situational problem	30%
Competency 2	Uses mathematical reasoning	70%