Course Outline

MYP Mathematics: Math 7

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COURSE DESCRIPTION

Math 7 focuses on the following mathematical concepts: integer operations, expressions/equations, ratio proportional reasoning, geometry, statistics, and probability.

The course incorporates the three fundamental concepts of the International Baccalaureate Middle Years Program: holistic learning, intercultural awareness and communication. Holistic learning is encouraged in many ways like linking different subject areas with math and helping student become aware of how math is used in real-life, meaningful situations. It fosters intercultural awareness in students by encouraging them to recognize links between the math in their life here in Iowa as well as how math and numbers are used in other parts of the world. Communication is fundamental to learning because it allows student to express what they have learned and understand. This includes communicating with written words, algebra equations, graphs and charts.

Students will begin to embody the IB Learner Profile as they display the following qualities:
An inquiring/questioning approach to your learning ~ actions that suggest you are knowledgeable and reasoned in your thinking ~ an ability to use critical thinking skills as you do math ~ an ability to communicate your ideas and receive the ideas of others ~ an honest, fair, and principled approach to your behavior and learning ~ an open - mindedness toward other's attitudes and beliefs ~ an empathy, compassion, and caring for others ~ a willingness to leave your comfort zone and become risk- takers ~ a balance in all aspects of your life ~an ability to reflect on life and learning.

AIMS AND OBJECTIVES

The aims of teaching and learning mathematics are to encourage and enable students to:

- Recognize that mathematics permeates the world around us
- Appreciate the usefulness, power and beauty of mathematics
- Enjoy mathematics and develop patienxe and persistence when solving problems
- Understand and be able to use the language, symbols and notation of mathematics
- Develop mathematical curiosity and use inductive and deductive reasoning when solving problems
- Become confident in using mathematics to analyze and solve problems both in school and in real-life situations
- Develop the knowledge, skills and attitudes necessary to pursue further studies in mathematics
- Develop abstract, logical and critical thinking and the ability to reflect critically upon their work and the work of others
- Develop a critical appreciation of the use of information and communication technology in mathematics
- Appreciate the international dimension of mathematics and it multicultural and historical perspectives

The MYP objectives state the specific targets set for learning in level-one math. Please refer to Merrill's website to view the MYP objectives.

Global Contexts

Learning in global contexts enables learners to directly link concepts with their own lives and put knowledge into action. This contextual learning in the MYP math helps students answer the important question "Why are we learning this?" through developing explanations for:

- identities and relationships
- orientation in time and space
- personal and cultural expression
- scientific and technical innovation
- globalization and sustainability
- fairness and development

TEXTS AND RESOURCES

The primary resources for this class are the Problem Based Instructional Tasks (PBIT) that have been created by the Math Leadership Team to match the Iowa Core. The Holt textbook will also be used.

METHODOLOGY

A variety of learning experiences will be used with the students including group work, inquiry, direct teaching, and helping them construct their own learning.

METHODS OF ASSESSMENT

Formative Assessments, class work, group work, teacher observations, and quizzes.

Summative Assessments include tests and projects.

For IB assessment, student work is evaluated on the following IB assessment criteria:

Criterion A	Knowledge & Understanding	max 8
Criterion B	Investigating Patterns	max 8
Criterion C	Communication in Mathematics	max 8
Criterion D	Applying Mathematics in Real-world Context	max 8

GRADING POLICY, INCLUDING THE USE OF MYP CRITERIA

All summative tasks will be assessed using MYP rubrics, and students will receive a copy of the rubrics to take home. Further, teachers will post each student's level of achievement on Infinite Campus.