



Lawrence Humanities and Leadership Development
70-71 North Parish Rd. Lawrence, MA 01841
Phone: 978 – 946 - 0724

Algebra 1 CP: 247
Teacher: Mr. Tanaka
Grade Level: 9th

Year: 2010 -2011
Room 406
Number of Credits: 5 Credits

Pre-requisite Courses: Successful completion of grade 8 mathematics or Bridge to Algebra

Course Description

Algebra is a branch of mathematics concerning the study of structure, relation and quantity. The main goal of Algebra 1 CP is to develop fluency in working with linear equations. Students will be expected to analyze situations verbally, numerically, graphically, and symbolically; and apply mathematical skills in making meaningful connections to life experiences.

Textbook(s) and/or required materials/supplies

Course Requirements:

Students are required to have a notebook, pencils and a calculator for this class. They are expected to attend class daily, take notes and participate during class and group work. They are required to finish all assignment on time. Students must take all tests and quizzes.

Course reading: Algebra 1 textbook- Glencoe Mathematics 2005

GRADING PROCEDURES:

1. Tests and Quizzes	40%
2. Homework Assignment/ Note-Journal	30%
3. Lab. / Project	20%
4. Group Work/ Class work/ Class Participation	10%

GRADING SCALE:

A	90-100
B	80 - 89
C	70 - 79
D	65 - 69
F	below 64

Classroom Conduct Expectations

The classroom and computer lab are a learning environment. All students are expected to adhere to The Habits of Mind Rubric as well as any agreed upon class- based rubrics for conduct.

Habits of Mind Rubric

Criteria	Exemplary	Proficient	Developing	Beginning
ATTENDANCE AND PUNCTUALITY	Rarely absent or tardy. Consistently meets academic deadlines.	Few absences or tardies that do not interfere with academic performance. Most academic deadlines are met.	Student absences or tardies interfere with academic performance. Some academic deadlines are met.	Student absences or tardies prohibit academic performance. Few if any academic deadlines are met.
PERSISTENCE	Always works diligently and shows strong perseverance when work is difficult. Never gives up.	Works hard most of the time and shows perseverance in difficult situations.	Shows sometimes shows perseverance in difficult situations, but sometimes gives up.	Does not persevere in difficult situations. Apathetic to outcome.
APPLIES PAST KNOWLEDGE TO NEW SITUATIONS	Always takes meaning from past experience and applies it to new situations.	Consistently uses what they have learned to find answers to new situations.	Struggles to connect past experiences to new situations. Sometimes will say “that reminds me of” to relate to a new situation.	Very little to no recall of similar previous situations.

Content:

The design of Algebra 1 allows the students to:

- Understand patterns, relations, and functions
- Represent and analyze mathematical situations and structures using algebraic symbols
- Use mathematical models to represent and understand quantitative relationships
- Analyze change in various contexts

Teacher Availability / Other course specific information

I am available before and after school in room 406.

Morning: 7:15 – 8:30 am.

After school: Upon Request

E-mail: stanaka@lawrence.k12.ma.us

Units	Learning Outcomes	Assessment(s)/ Success Criteria	Relevant Content and Performance Standards	Performance Tasks
<p>Quarter 1</p> <p>Expressions and Equations</p> <p>Chapters: 1-3</p>	<p>By the end of this quarter students will be able to write expressions and equations for a given problem.</p> <p>They will be able to solve equations with variables on both sides.</p>	<p>Students will complete:</p> <p>Pre-Assessments Tests/ Projects Quizzes Writing Prompts Procedural writing</p>	<p>Students will understand:</p> <p>-Apply the rules of order of operations (PRA. 2)</p> <p>-Evaluate algebraic expressions (PRA. 2)</p> <p>-Solve linear equations and inequalities (PRA.2)</p>	<p>Order of operation project</p> <p>Comparison of temperature</p> <p>Using coupons when shopping</p> <p>(Rubric will be provided)</p>
<p>Quarter 2</p> <p>Linear Functions</p> <p>Chapters: 4-6</p>	<p>By the end of this quarter students will be able to identify and graph and analyze a linear function.</p> <p>They will also be able to solve, graph and interpret inequalities.</p>	<p>Students will complete:</p> <p>Pre-Assessments Tests/ Projects Quizzes Writing Prompts Procedural writing</p>	<p>Students will understand:</p> <p>-Different representation of functions and relations (PRA. 1)</p> <p>-The equation of a line in point-slope form or slope-intercept form (PRA. 1)</p> <p>-Equations of inequalities and their visual representations (PRA. 1)</p>	<p>Converting between currencies</p> <p>Locating places on a map using the coordinate plane</p> <p>Calculate the steepness of a stair</p> <p>Find the solution/s of an equation representing a real life situation.</p> <p>(Rubric will be provided)</p>

<p>Quarter 3</p> <p>Linear Functions and Polynomials</p> <p>Chapters: 7-8</p>	<p>By the end of this quarter students will be able to solve systems of equations.</p> <p>They will also be able to identify polynomials and perform operations with them.</p> <p>They will be able to factor polynomial</p>	<p>Students will complete:</p> <p>Pre-Assessments Tests/ Projects Quizzes Writing Prompts Procedural writing</p>	<p>Student will understand:</p> <p>-How to model and solve systems of linear equations and inequalities (PRA.2)</p> <p>-Add, subtract, multiply and divide polynomials</p> <p>-factor polynomials (PRA. 2)</p>	<p>Given two equations representing the profit of two businesses; compare their profit by looking at their graphs</p> <p>Modeling real world situations: select an example of a real life situation describe as a linear function.</p> <p>Importance of scientific notation Performing operations with numbers written in scientific notation</p> <p>(Rubric will be provided)</p>
<p>Quarter 4</p> <p>Quadratic Functions, Radicals and Data Analysis</p> <p>Chapters: 9,11,13</p>	<p>By the end of this quarter students will be able to graph a quadratic equation.</p> <p>They will be able to able to perform operations with radical expressions.</p> <p>They will be able to use a number of graphs to represent a set of data</p>	<p>Students will complete:</p> <p>Pre-Assessments Tests/ Projects Quizzes Writing Prompts Procedural writing</p>	<p>Students will understand:</p> <p>-The different ways of solving a quadratic equation (PRA. 2)</p> <p>-The appropriate graphical representation for a set of data (DSP.1)</p> <p>-The concept of experimental and theoretical probability (DSP.1)</p>	<p>Determine the vertex of a quadratic function graph.</p> <p>Use the Pythagorean Theorem to solve a real-life problem.</p> <p>Describe changes in population</p> <p>Finding the speed of roller coasters</p> <p>(Rubric will be provided)</p>