



Name of School:

Name of Course: **Cognitive Tutor Algebra 1**

Instructor Information

Name:

E-mail address:

School phone number:

Web page address:

Best times to be reached:

Course Description

This course presents an algebra curriculum that combines state-of-the-art computer software with collaborative classroom activities. The software component, which represents 40% of the instructional time, allows the students to work at their own pace using spreadsheets, graphs, equation solvers, and other data organizing tools to solve algebraic problems. The text component, which extends the algebraic concepts developed in the software, allows students to collaborate with peers, to explore and solve real-world problem scenarios, and to present solutions to the class.

District Standards and Power Benchmarks

Number & Operations Standard: Understands and applies concepts of numbers and operations.

- 1: Understands numbers, ways of representing numbers, relationships among numbers, and number systems
- 2: Understands the meanings of operations and how they relate to one another
- 3: Computes fluently and makes reasonable estimates.

Algebra Standard: Understands and applies concepts of algebra and functions.

- 1: Understands patterns, relations and functions
- 2: Represents and analyzes mathematical situations and structures using algebraic symbols
- 3: Uses mathematical models to represent and understand quantitative relationships
- 4: Analyzes change in a variety of situations

Data Analysis and Probability

- 4: Understands and applies concepts of probability

Problem Solving: Understands and applies problem solving strategies

1. Uses a variety of strategies to solve problems

Course Information

Course length: Four terms

Credit: .5 per term

Basic computer knowledge is recommended for this course.

This course covers content similar to Algebra 1 in a different format.

Students must pass first term in order to proceed into second term

Course Outline/Calendar

Terms A&B:

Unit 1: Patterns & Rational Numbers
Unit 1 cont.: Multiple Representations
Unit 2: Proportional Reasoning, Percents
& Direct Variation
Unit 3: Solving Linear Equations
Unit 4: Linear Functions & Inequalities
Unit 5: Writing & Graphing Linear Equations

Terms C&D:

Unit 7: Systems of Equations & Inequalities
Unit 9: Properties of Exponents
Unit 10: Polynomial Functions & Rational Expressions
Unit 8: Quadratic Functions
Unit 11: Probability
Unit 13: Quadratic & Exponential Functions and Logic
Unit 12: Statistical Analysis
Unit 6 : Lines of Best Fit (Optional)

Text/Other Required Materials/Resources

Text: *Cognitive Tutor Algebra I* by Carnegie Learning - This is a set of consumable books for which students will be charged a fee.

Students will need to bring the following materials to class everyday: books, notebook or binder, and pencil.

Instructional Procedures & Support

Students will be expected to participate in direct instruction, cooperative learning groups, and lab activities for all of the class period everyday in order to achieve success in this class. Major assignments could include homework, tests, computer work, and group presentations. Students are also expected to complete all outside assignments prior to the next class meeting unless otherwise notified. Make-up guidelines will be clarified the first day of class. Students who do not understand the material as presented in class are welcome to make an appointment to meet with the teacher before or after school.

Classroom Management Procedures

Students are expected to be in class on time and prepared daily. Students are expected to stay in the classroom for the entire class period and are not allowed to leave class without permission. There will be no food (including candy) or drink allowed in the classroom.

Assessment Plan

Grades will be assessed in the following manner

Concept Check/Projects	15%
Class work/Openers/Notebooks	5%
Tests	45%
Computer Lab	25%
Final Exam	10%

Grading System

Grades will be determined by the DCSD Grading Scale.

100-90	A
89-80	B
79-70	C
69-60	D
59-0	F