



# U.S. INTERNATIONAL CHRISTIAN ACADEMY

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<http://www.usicahs.org/Curriculum.html>

## LESSON PLAN

**Grade/Course: ALGEBRA I No. 1200310**

**Grade Level: 9<sup>th</sup> High School**

**A)TEXT BOOK: Glencoe McGraw Hill Algebra Concepts and Applications  
Glencoe Algebra: Concepts and Applications, Volume 2, Student Edition [Hardcover]  
McGraw-Hill(Author)  
ISBN-10: 0078607752 | ISBN-13: 978-0078607752**

**Order No.: 1**

**Code:ALG1000**

**Class Type: Online**

**Resources:**

Text book  
Teacher works CD  
Teacher interactive  
online  
Links  
Sky Conference

**Instructional Supports:**

Textbook, Magazines, Journals, Websites  
Links, Blackboard, Conference,  
Comprehensive Reading Plan

**Length:1 year**

**Area: Mathematics**

**Credits: 1**

**Total Numbers of class hours: 300 hrs**

**Type: Mandatory**

**Standards:**  
Florida Sunshine State  
Standards

**Prerequisite:**  
Students must have successfully passed a pre-  
algebra or a general math class in middle/high  
school.

## **B) LESSON PLAN**

### **Description:**

This course is a full year, high school credit course that is intended for the student who has successfully mastered the core algebraic concepts covered in the prerequisite course, Pre-Algebra.

Within the Algebra I course, the student will explore basic algebraic fundamentals such as evaluating, creating, solving and graphing linear, quadratic, and polynomial functions. Upon successfully completing the course, the student should have mastered the following concepts:

- Solve single variable, absolute value, and linear systems of equations.
- Solve and graph single variable, absolute value, and linear inequalities.
- Evaluate, solve, and graph linear and quadratic functions as well as conceptualize the relationship between the independent and dependent variable of a function.
- Understand and know how to apply the distance, midpoint, and slope formulas as well as the Pythagorean theorem.
- Form an equation of a line using the slope-intercept, point-slope and standard forms of a line.

- Organize data in the form of a table or matrix; perform complex matrix operations such as multiplication, evaluating the determinant, and solving a system of linear equations using Cramer's Rule.
- Apply basic fundamental rules of exponents.
- Be able to construct a formula or equation necessary to solve algebraic word problems involving area, perimeter, and linear systems of equations, basic probability and statistical reasoning, distance, and compounding interest.
- Evaluate rational

## **C) LESSON PLAN**

### **Objectives:**

1. To develop in all students an appreciation, curiosity and understanding for mathematics
2. to develop in all students analytical, reasoning, and critical thinking skills
3. to promote an awareness of mathematics

## **D) LESSON PLAN Contents**

### **Chapters**

**Chapter 3**  
Addition and  
Subtraction/Equations

Number, Number Sense and  
Operations (Week 1 & 2)

**Chapter 4:** Multiplication & Data Analysis and Probability  
division of Equations  
(Week 3 & 4)

**Chapter 5**  
Proportional Reasoning  
and Probability  
(Week 5 )

<b>Chapter 6</b> Functions and Graphs	Number, Number Sense and Operations (Week 6)
<b>Chapter 7</b> Linear Equations ( Week 7)	Patterns, Functions and Algebra
<b>Chapter 8</b> Powers and Roots (Week 8)	
<b>Chapter 9</b> Polynomials (Week 9)	Patterns, Functions and Algebra
<b>Chapter 10</b> Factoring (Week 10)	Mathematical Process Standard
<b>Chapter 11</b> Quadratic and Exponential functions (Week 11)	
<b>Chapter 12</b> Inequalities	Number, Number Sense and Operations (Week 12)
<b>Chapter 13</b> Systems of Equations and Inequalities	Patterns, Functions and Algebra (Week 13)
<b>Chapter 14</b> Radical Expressions	Mathematical Process Standard (Week 14)
<b>Chapter 15</b> Rational Expressions	Mathematical Process Standard (Week 15)

**Quiz, and Final Exams: TBA**

## **F) LESSON PLAN Reference, Websites, Journals, Magazine & Books:**

1. McDougalLittell Algebra 1: Applications, Equations, & Graphs [Hardcover] (Author)
2. Algebra Survival Guide Workbook: Thousands of Problems To Sharpen Skills and Enhance Understanding [Paperback] by Josh Rappaport(Author)
- 3 High School Algebra Tutor (High School Tutors Study Guides) [Paperback]  
The Editors of REA (Author), Algebra Study Guides (Author), Staff of Research & Education Association (Author)

### **H) Web Reference:**

<http://www.calculatorsoup.com/>  
[www.mathlinks.us](http://www.mathlinks.us)  
[www.coolmath.com](http://www.coolmath.com)  
[www.mathpower.com/linkstu.htm](http://www.mathpower.com/linkstu.htm)  
[www.algebra.com](http://www.algebra.com)  
[www.math.com](http://www.math.com)  
[www.purplemath.com/modules/index.htm](http://www.purplemath.com/modules/index.htm)  
[www.softmath.com/links-to-algebra.html](http://www.softmath.com/links-to-algebra.html)  
[www.emtech.net/math2.htm](http://www.emtech.net/math2.htm)  
[www.homeschoolmath.net/online/algebra.php](http://www.homeschoolmath.net/online/algebra.php)  
[www.webmath.com](http://www.webmath.com)  
<http://www.homeworksimplified.com>  
[www.homeschoolmath.net](http://www.homeschoolmath.net)  
<http://school.discoveryeducation.com/homeworkhelp/webmath/>  
<http://www.cut-the-knot.org/content.shtml>  
<http://tutorial.math.lamar.edu/Extras/AlgebraTrigReview/AlgebraTrigIntro.aspx>  
<http://www.sosmath.com/>  
<http://www.ams.org/mathscinet/>  
<http://www.aaamath.com/>  
<http://www.algebrahelp.com>

### **I. Journals:**

Advances in Applied Mathematics  
Advances in Difference Equations  
Advances in Differential Equations  
Advances in Geometry  
Advances in Mathematics  
Advances in Theoretical and Mathematical Physics  
Algebra & Number Theory  
Algebra Colloquium  
Algebra Universalis  
Algebraic & Geometric Topology  
American Journal of Mathematics

American Mathematical Monthly  
Analysis and Applications  
The Analyst

**J. Magazines:**

Math Horizons  
Millennium Mathematics

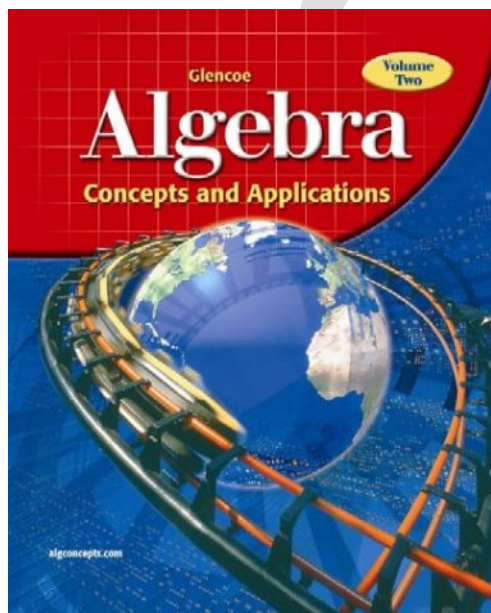
**M. Comprehensive Reading Plan**

Students are required to read at least 1 book or their equivalent during each class as independent reading at-home. Students must also read for 30 minutes at home as part of their daily homework assignment in all subjects. Check your Class Reading Assignment at [www.USICAhs.org/CURRICULUM](http://www.USICAhs.org/CURRICULUM) and check free ebooks at [www.openlibrary.org](http://www.openlibrary.org).

**Text Book Description:**

Publication Date: July 5, 2003 | ISBN-10: 0078607752 | ISBN-13: 978-0078607752 | Edition: 1  
An ideal program for struggling students.  
**Glencoe Algebra: Concepts and Applications**, Volume 1 and Volume 2 cover all Algebra 1 concepts in a two-volume format.

**BOOK:**



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