

# ALGEBRA WORLD

## An Algebra Introduction

Grades 7 and up

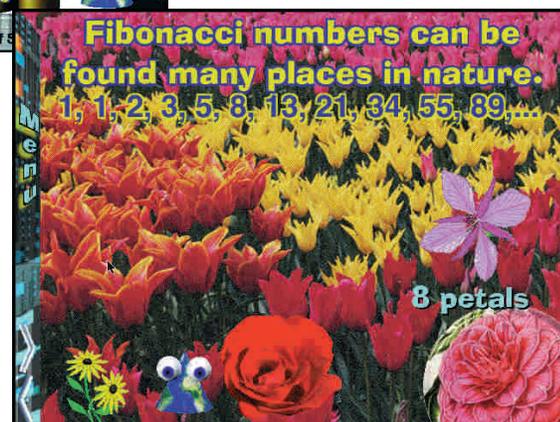
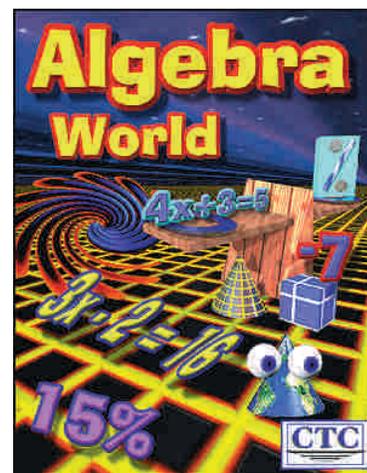
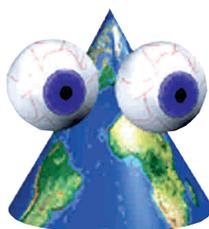
Published by:  
Cognitive Technologies Corporation

*Algebra World* teaches and reinforces algebra concepts. Equations and their relationship to word problems are emphasized throughout the program. This program combines detailed lessons developed with real world examples, along with interesting applications such as gears, the Golden ratio, Fibonacci numbers, and exploring number patterns in flowers, spirals, and music. These applications alone motivate students to learn and enjoy math. Students solve math challenges to earn map puzzle pieces. The challenges serve as an assessment of the student's understanding of algebra. Students must understand the lessons and master problem solving in order to solve the challenges. This gives students a much needed sense of accomplishment and an assurance for you that they do understand the algebra concepts and applications presented.

*Algebra World* can be used by individual students, for in-class presentations, or in group work. The lessons and applications make great interactive classroom presentations and provide rich material for discussion. The math challenges in the program's challenge sections are ideal for group work.

### Educational Benefits

- Problem Solving
- Equation Solving
- Mathematical Reasoning
- Develop Operation Sense
- Proportional Reasoning
- Spatial Reasoning
- Connections Within Math
- Connections Outside Math
- Mathematical Patterns



**"The software does an outstanding job of introducing basic algebra concepts. Students loved the illustrations and sound effects, and they enjoyed interacting with the computer-generated manipulatives. ... The program was intrinsically motivational."**

**— National Council of Teachers of Mathematics, February 1999 issue of *Mathematics Teaching in the Middle School***

School versions include a teacher's manual. The manual includes suggestions on how to use and manage the software in school, answers to all the software challenges, and student worksheets that can be used for assessment or as additional teaching tools.

*SAT*

The images and teaching methods used to develop the math concepts in

*Algebra World* and *Pre-Algebra World* (also available) have proven to be highly successful. The lessons were developed by teachers with over 40 years of combined experience. The students of the math teachers contributing to these programs consistently score higher on the math SAT in the second semester of 7th grade math than the national average of high school students taking the math SAT.

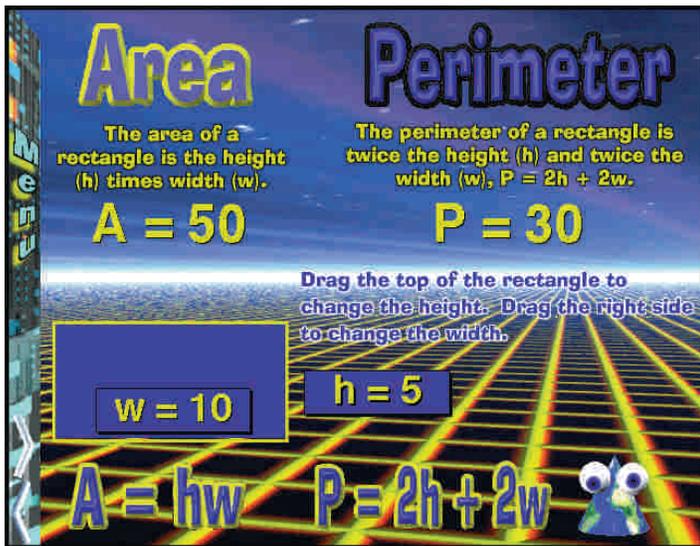
Each topic has a series of detailed lessons designed to teach key mathematical concepts. Each section has an application related to the topic section. The application shows how math is related to the world in a fun and interesting way. Each section has a challenge section to test proficiency and understanding of the topic. When students complete the program they should have mastered the topics outlined on the following page. By completing each section's challenge,



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Rockville, MD 20852

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the student demonstrates an understanding of the subject, its rules, mathematical reasoning and problem solving ability. Students will be fully prepared to move on to higher levels in algebra as well as have a greater appreciation of how algebra relates to the world.



Students interactively learn about area and perimeter by increasing and decreasing the width and height of objects.

“Algebra World generates excitement and understanding in the classroom. Students who have been afraid of math get involved with this program. It sparks an interest and produces success!”

— Joan Slatniske  
Our Lady of Mercy, MD

The California Instructional Technology Clearinghouse recommends *Algebra World* as Desirable.

“A great program for classroom use! It helps develop a deep understanding and keeps students interested with an engaging learning environment. I highly recommend it!”

— Dr. Vicki Sharp  
School of Education  
California State University Northridge

## Features

- Student Tracking
- Three Skill Levels
- Challenges/Assessment
- Word Problems
- Math Applications
- Unlimited Practice Problems

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## Program Outline

### Expressions

- Variables
- Expressions
- Algebra Eyes (Representation)
- Order of Operations
- Number & Expression Patterns

### Integers

- Negatives
- Integer Operations
- Coordinate Plane
- Maps

### Equations

- Equations
- Balance
- Solving Equations
- Two-Step Equations
- Formulas

### Ratio, Proportions & Percents

- Ratios
- Proportions
- Percent
- Conversion
- Gears

### Geometry

- Lines and Angles
- Triangles
- Polygons
- Symmetry
- Golden Proportions & Shapes



## Algebra World

### Mac/Win CD-ROM

	Product #	
Home Version	22	\$39.95
School Version	23	\$79.95
5 Lab Pack	24	\$224.95
10 Lab Pack	25	\$369.95
20 Lab Pack	26	\$659.95
Network/Site License	27	\$999.95

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