



Sunshine Elite Education

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Enhanced AGS I, AGS II, AGS III Courses

Math for Middle & High school

In 2016, Beaverton School District changed their math curriculum from the traditional Algebra I, Geometry, Algebra II sequence to what is called the AGS system which follows the Common Core State Standards (CCSS) for mathematics. AGS stands for Algebra, Geometry, and Statistics, and it reforms the math curriculum by combining Algebra, Geometry, and Statistics into 3 integrated levels: AGS I, AGS II, AGS III.

As the teachers work to implement and students work to adjust to this new AGS system, many problems and a lot of confusion have been caused by the new system. By comparing the AGS system to the traditional Algebra I, Geometry and Algebra II sequence, two major drawbacks become apparent:

1. **The overall content covered in the AGS system is both less coherent and less comprehensive than the traditional sequence, especially in its treatment of Geometry.** The mathematical foundations being laid are incomplete and may cause difficulty in later more advanced math and physics classes in high school.
2. **The inquiry-based methodology of MVP (used by all BSD schools) frequently causes a great deal of conceptual confusion for students, particularly in the absence of effective, systematic instruction.** The theory behind the inquiry-based methodology may be good, but it is difficult for most teachers to learn and/or implement it effectively, especially when the class size is big. At its best, the inquiry-based methodology still often causes poor performance in many students due to their particular disposition. We have found that an increasing number of students feel that math at school has become confusing. Even for students who had been excelling at math, they may not be building up the foundations for future success, nor can they appreciate the integrity between Algebra and Geometry.

To help parents and students resolve these problems, Sunshine has designed the enhanced AGS I, AGS II, and AGS III courses which focus on the topics in those classes to ensure students succeed at each level. Concurrently, we enhance the topics by reinserting essential parts that have been neglected in AGS; Our instructors have experience teaching these courses in an effective and systematic way.



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Content Comparison from AGS to Algebra I, Geometry, Algebra II

AGS I, AGS II, AGS III Contents	Contents in Algebra I/Geometry/Algebra II
AGS I	
Module 1: Sequences	Chapter 1-6 in Algebra I
Module 2: Linear & Exponential Functions	
Module 3: Features of Functions	
Module 4: Equations & Inequalities	
Module 5: Systems of Equations & Inequalities	
Module 6: Transformations & Symmetry	Chapter 1, 2 & 4 in Geometry
Module 7: Congruence, Construction & Proof	
Module 8: Connecting Algebra & Geometry	
Module 9: Modeling Data	Statistics in PreAlgebra and Algebra I
AGS II	
Module 1: Quadratic Functions	Chapter 9, 10 in Algebra I & Piecewise Functions
Module 2: Structures of Expressions	
Module 3: Quadratic Equations	
Module 4: More Functions, More Features	
Module 5: Geometric Figures	Chapter 5-8 & 11 in Geometry; and Chapter 10 in Algebra II
Module 6: Similarity and Right Triangle Trigonometry	
Module 7: Circles from a Geometric Perspective	
Module 8: Circles and Other Conics	
Module 9: Probability	In PreAlgebra and some in Algebra II
AGS III	
Module 1: Functions and Their Inverses	Chapter 1-6 in Algebra II
Module 2: Logarithmic Functions	
Module 3: Polynomial Functions	
Module 4: Rational Expressions and Functions	
Module 5: Modeling with Geometry	Chapter 10 in Geometry
Module 6: Modeling Periodic Behavior	Chapter 7-12 in Algebra II
Module 7: Trig. Functions Equations & Identities	
Module 8: Modeling with Functions	
Module 9: Statistics	

References for inquiry-based learning:

<https://www.wabisabilearning.com/blog/inquiry-based-learning-disadvantages>

<https://collegepuzzle.stanford.edu/the-pros-and-cons-of-inquiry-based-learning-for-college-success/>