

Grade Level / Course Summary with Big Ideas:

This course is designed to model and solve real world challenges with particular focus on Pennsylvania Academic Standards in algebra and geometry. It will enable students to strengthen their problem solving skills while offering depth to the technology component. This course will solidify a student's understanding of Mathematics as well as STEM frameworks. Students will develop problem-solving skills while improving their understanding of number theory, statistics, probability, interpretation of graphs and equations and finance through real world applications. This course is aligned with the PA Academic Standards in Mathematics.

Grade Level Modules (Units):

Suggested Timeline
of Weeks or # of Class Periods/Lessons

1. Functions	10 Days
2. Polynomials.....	10 Days
3. Radical Relationships.....	8 Days
4. Rational Relationships	12 Days
5. Exponential and Logarithmic Functions	8 Days
6. Applications of Geometry and Trigonometry	12 Days
7. Counting and Probability	8 Days
8. Data Analysis and Statistics.....	12 Days
9. Personal Finance	10 Days

Learning Activities/Modes of Formative and Summative Assessment:

Large group instruction
Small group work with differentiated instruction
Teacher Observations
Computer Simulations and Graphing utilities
Projects with associated Rubrics
Tests and Quizzes

Primary Instructional Resources:

Acceptable Internet websites and applications including but not limited to...

- KhanAcademy
- Aleks
- PDESAS
- YouTube

Teacher generated resources