Overview

The focus of this project is to provide an application-based approach to teaching algebra 2. Students will study algebraic concepts and functions through the lens of personal finance. After each unit of study, students will complete a financial application project that will go into each student’s “financial” portfolio.

Timeline

The following is a projected timeline of the project with a description of the application projects the students will complete for their portfolios.

September 6-7: Preparing a Budget
Students will choose a career and develop a personal budget. They will look at typically expenses by most consumers today, chart out a budget, and analyze cash flow. **Math topics:** domain, linear equations and inequalities, graphing equations, system of equations, and matrices.

September 28: Modeling a Business
Students will mathematically model a business by looking at supply and demand, fixed and variable expenses, breakeven analysis, and profit equations. **Math topics:** domain, range, linear equations, parabola, and quadratic formula.

October 19: Banking Services & Credit
Students will investigate banking services such as checking and saving accounts and investing. Also, students will examine consumer credit such as credit cards and loans. **Math topics:** exponential functions, natural logarithms, and compound interest.

November 30: Automobile & Home Ownership
Student will explore auto and home ownership. They will consider leasing versus purchasing an auto or home. In addition, students will research auto and home insurance. **Math topics:** exponential growth and decay, systems of linear equations, and piecewise functions.

December 14: The Stock Market & Planning for Retirement
Students will investigate stock market data such as simple moving average, transaction fees, stock splits, and dividend income. Also, students will research retirement planning by looking at pensions, life insurance, and social security benefits. **Math topics:** probability and data interpretation, exponential functions, and logarithmic functions.

Goals

- Students will learn about investments, credit, auto and home expenses, insurance, income tax, and household budgeting while gaining confidence in working with common algebraic functions.
- Students will develop more advanced problem solving skills by working with authentic financial problems.
- Students will learn life skills that will prepare them for future financial independence in adulthood.

Texts


Standards

The following standards come from the Common Core Standards: *(http://ed.sc.gov/agency/programs-services/190/documents/CCSSI_MathStandards.pdf)*

- N.VM.6,8
- A.CED.1,2,4
- A.REI
- F.IF.1,4,6
- F.LE.4
- S.ID.2,4