Practical Math

COURSE DESCRIPTION: In K12 High School Practical Math, students learn about the many practical applications of math in everyday life. Topics of study in this course include statistics, probability, statistical graphs, regression, finance, budgeting, and mathematical modeling. Proficiency is measured through frequent online and offline assessments, as well as class participation. Project units also allow students to apply and extend their math skills for problem solving.

PREREQUISITES: Algebra 1 and Geometry

COURSE LENGTH: Two Semesters

REQUIRED TEXT: Practical Math: Reference Guide and Problem Sets.

MATERIALS LIST: No required materials for this course.

COURSE OUTLINE:

SEMESTER 1:
Unit 1: Working with Data

- Semester Introduction
- Foundations
- Measures of Center 1
- Measures of Center 2
- Measures of Center 3
- Statistical Graphs 1
- Statistical Graphs 2
- Statistical Graphs 3
- Measures of Spread 1
- Measures of Spread 2
- Measures of Spread 3
- Practice and Assess
- Unit Review
- Unit Test

Unit 2: Project: Statistics in the Media

- Project Research 1
- Project Research 2
- Project Draft 1
- Project Draft 2
- Project Completion

Unit 3: Connections Between Data

- Foundations
- Your Choice
- Scatter Plots 1
- Scatter Plots 2
- Scatter Plots 3
- Correlation 1
- Correlation 2
- Correlation 3
- Linear Regression 1
- Linear Regression 2
- Linear Regression 3
- More Regression 1
- More Regression 2
- More Regression 3
- Unit Review
- Unit Test

Unit 4: Project: Population Analysis

- Project Research 1
- Project Research 2
- Project Draft 1
- Project Draft 2
- Project Completion

Unit 5: Uncertainty

- Foundations
- Permutations and Combinations 1
- Permutations and Combinations 2
- Permutations and Combinations 3
- Probability 1
- Probability 2
- Probability 3
- Expected Value 1
- Expected Value 2
- Expected Value 3
- Unit Review
- Unit Test

Unit 6: Project: Spinner Games
- Project Research 1
- Project Research 2
- Project Draft 1
- Project Draft 2
- Project Completion

Unit 7: Math Models
- Foundations
- Variation 1
- Variation 2
- Variation 3
- Sequences 1
- Sequences 2
- Sequences 3
- Matrices 1
- Matrices 2
- Matrices 3
- Geometric Models 1
- Geometric Models 2
- Geometric Models 3

- Unit Review
- Unit Test

Unit 8: Semester Review and Test
- Semester Review
- Semester Test

SEMESTER 2:

Unit 1: Income
- Semester Introduction
- Foundations
- Making Money 1
- Making Money 2
- Making Money 3
- Taxes and Other Deductions 1
- Taxes and Other Deductions 2
- Taxes and Other Deductions 3
- Banking 1
- Banking 2
- Banking 3
- Unit Review
- Unit Test

Unit 2: Project: Jobs and Living Expenses
- Project Research 1
- Project Research 2
- Project Draft 1
- Project Draft 2
- Project Completion

Unit 3: Budgeting
- Foundations
- Budgeting 1
- Budgeting 2

- Budgeting 3
- Cash vs. Credit 1
- Cash vs. Credit 2
- Cash vs. Credit 3
- Housing 1
- Housing 2
- Housing 3
- Transportation 1
- Transportation 2
- Transportation 3
- Unit Review
- Unit Test

Unit 4: Project: Buy vs. Lease
- Project Research 1
- Project Research 2
- Project Draft 1
- Project Draft 2
- Project Completion

Unit 5: Saving Money
- Foundations
- Interest 1
- Interest 2
- Interest 3
- Insurance 1
- Insurance 2
- Insurance 3
- Investments 1
- Investments 2
- Investments 3
- Unit Review
- Unit Test

Unit 6: Project: Saving Strategies

- Project Research 1
- Project Research 2
- Project Draft 1
- Project Draft 2
- Project Completion

Unit 7: More Math Models

- Foundations
- Growth and Decay 1
- Growth and Decay 2
- Growth and Decay 3
- Math and Music 1
- Math and Music 2
- Math and Music 3
- Right Triangle Trig 1
- Right Triangle Trig 2
- Right Triangle Trig 3
- Periodicity 1
- Periodicity 2
- Periodicity 3
- Unit Review
- Unit Test

Unit 8: Semester Review and Test

- Semester Review
- Semester Test