Curriculum Development
In the Fairfield Public Schools

FAIRFIELD PUBLIC SCHOOLS
FAIRFIELD, CONNECTICUT

Personal Finance 43

Board of Education Approved 03/27/2007

PERSONAL FINANCE 43

Statement of Purpose

Personal Finance 43 is a senior elective course that will assist students in learning to use mathematics effectively as a tool in their personal and business lives. It is designed to prepare students for success in their daily lives in the 21st century. This course will help students develop their abilities to manage money and be prepared to make informed financial decisions. They will apply mathematical concepts while thinking critically, working cooperatively and communicating their ideas clearly.

Audience

The course is intended for seniors who have successfully completed at least two years of high school mathematics and are interested in applying math skills to money management.

Prerequisites

Successful completion of at least two high school mathematics courses

Course Description

This course is intended to prepare students for the world of budgeting and money management. Personal Finance will include such topics as banking, budgeting, income, loans, investments, credit, taxes, insurance, data representation and data interpretation. Student activities will include real-life situations (for example, purchasing a vehicle).

Course Objectives

Students will be able to:

- understand terminology relating to personal and business mathematics applications.
- apply basic math skills to the solution of personal and business applications.
- use common mathematics formulas to solve a variety of personal and business mathematics problems.
- use tables to compute calculations related to financial issues.
- fill out the appropriate forms for deposits and withdrawals and maintain balances for checking and savings accounts.
- calculate gross pay under a variety of payment methods.
- adjust gross pay by incorporating common deductions.
- use and/or prepare a monthly budget.
- calculate final sale price for various purchases.
- solve problems involving financial applications including interest and amortization of loans.
- compute costs associated with car ownership.
- calculate interest and determine annual yield of stocks, bonds and CD's.
- calculate the premiums for health and life insurance.

Skill Objectives

Students will:

- compute the total checking account deposit.

- write a check.
- calculate the balance in a check register.
- calculate the present balance on a checking account bank statement.
- reconcile a check register with a bank account statement.
- compute on line banking charges and update the check register.
- complete a savings account deposit slip, and compute the total deposit.
- fill out a savings account withdrawal slip.
- compute the new balance on a savings account statement.
- calculate simple interest.
- calculate the compound interest.
- find compound interest using tables.
- find interest for daily compounding.
- compute the future value of an ordinary annuity and annuity due.
- calculate straight-time pay.
- calculate total pay with straight-time pay and overtime pay combined.
- compute the total pay on a piecework basis.
- determine the salary per pay period.
- calculate the straight commission and determine the gross pay.
- compute the total graduated commission.
- read tables to find Federal Income tax withholdings.
- compute the state tax on a straight percent basis.
- compute the state tax on a graduated income basis.
- compute the amount of income withheld for Social Security and Medicare taxes.
- calculate the deduction for group insurance.
- calculate the net pay per period.
- compute the average monthly expenditure.
- use records of past expenditure to prepare a monthly budget sheet.
- compare amounts budgeted to actual expenditures.
- compute sales tax.
- calculate the total purchase price.
- calculate the unit price.
- find the better buy based on the unit price.
- calculate the final price after using a coupon or rebate.
- determine the dollar amount of a markdown.
- compute the sale price when the markdown rate is known.
- calculate a balance on a charge account.
- differentiate between charge, credit and debit cards.
- compute the maturity value and interest amount of a single payment loan.
- calculate the amount financed on an installment loan.
- figure out the monthly payment, total amount repaid, and finance charge on an installment loan.
- work out the payment to interest, payment to principal, and the new balance.
- compute the final payment when paying off a simple interest installment loan.
- use a table to find the APR.

- compute the sticker price of a new vehicle.
- calculate the dealer's cost of a new vehicle.
- calculate the average retail price of a used vehicle.
- use table to compute the annual premium for vehicle insurance.
- compute the total cost per mile of operating and maintaining a vehicle.
- calculate the total cost of leasing a vehicle.
- calculate the cost per mile of renting a vehicle.
- use tables to compute interest on CD's.
- solve for the total cost of a stock investment.
- calculate returns from a stock sale.
- compute the annual interest and yield on a bond.
- compute health insurance premiums.
- calculate the amount the patient pays for health care.
- utilize tables to compute the annual premium for term life insurance.
- apply table to data to compute the annual premiums for three types of life insurance.

Math Standards

Algebraic Reasoning: Patterns And Functions – Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.

1.1 Students should understand and describe patterns and functional relationships.

Core

1.1a Students should describe relationships and make generalizations about patterns and functions.

Extended

1.1a Students should model real world situations and make generalizations about mathematical relationships using a variety of patterns and functions.

Numerical and Proportional Reasoning – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.

2.1 Students should understand that a variety of numerical representations can be used to describe quantitative relationships.

Core

2.1a Students should extend the understanding of number to include integers, rational numbers, and real numbers.

2.1b Students should interpret and represent large sets of numbers with the aid of technology.

2.2 Students should use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.

Core

2.2a Students should develop strategies for computation and estimation using properties of number systems to solve problems.

Working with Data: Probability and Statistics – Data can be analyzed to make informed decisions using a variety of strategies, tools and technologies.

4.1 Students should collect, organize and display data using appropriate statistical and graphical methods.

Core

4.1a Students should create the appropriate visual or graphical representation of real data.

Essential Questions

- How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?
- How are quantitative relationships represented by numbers?
- How can collecting, organizing and displaying data help us analyze information and make reasonable predictions and informed decisions?

Focus Questions

- What are the appropriate forms associated with banking accounts?
- How are banking balances maintained?
- How is gross pay calculated and adjusted under a variety of payment methods?
- How do you prepare and use a monthly budget?
- How do you calculate final sale price for various purchases?
- How are the maturity values and interest amounts of loans computed?
- How are payments to installment loans allocated and paid off?
- How do you compute costs associated with owning and purchasing a car?
- How are interest and/or yield determined for stocks, bonds, and CD's?
- How do you calculate the premiums for health and life insurance?

UNITS OF STUDY

Unit 1: Banking (Checking and Savings)

Math Standards

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2.2 Students should use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.
Core
2.2a Students should develop strategies for computation and estimation using properties of number systems to solve problems.

Essential Questions

- How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?
- How are quantitative relationships represented by numbers?

Focus Questions

- What are the appropriate forms associated with banking accounts?
- How are banking balances maintained?

Core Topics

- Checking Accounts
- Saving Accounts

Unit Objectives

Students will be able to:

- understand terminology relating to personal and business mathematics applications.
- apply basic math skills to the solution of personal and business applications.
- fill out the appropriate forms for deposits and withdrawals and maintain balances for checking and savings accounts.

Skill Objectives

Students will:

- compute the total checking account deposit.
- write a check.
- calculate the balance in a check register.
- calculate the present balance on a checking account bank statement.
- reconcile a check register with a bank account statement.
- compute on line banking charges and update the check register.
- complete a savings account deposit slip, and compute the total deposit.
- fill out a savings account withdrawal slip.
- compute the new balance on a savings account statement.
- calculate simple interest.
- calculate the compound interest.
- find compound interest using tables.
- find interest for daily compounding.
- compute the future value of an ordinary annuity and annuity due.

Sample Assessment

Reconciling project

Pacing

7 weeks

Unit 2: INCOME

Math Standards

Algebraic Reasoning: Patterns And Functions – Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.

1.1 Students should understand and describe patterns and functional relationships.
Core
1.1a Students should describe relationships and make generalizations about patterns and functions.

Numerical and Proportional Reasoning – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.

2.1 Students should understand that a variety of numerical representations can be used to describe quantitative relationships.
Core
2.1a Students should extend the understanding of number to include integers, rational numbers, and real numbers.
2.1b Students should interpret and represent large sets of numbers with the aid of technology.

2.2 Students should use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.
Core
2.2a Students should develop strategies for computation and estimation using properties of number systems to solve problems.

Essential Questions

- How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?
- How are quantitative relationships represented by numbers?

Focus Question

- How is gross pay calculated and adjusted under a variety of payment methods?

Core Topics

- Gross income
- Net income

Unit Objectives

Students will be able to:

- understand terminology relating to personal and business mathematics applications.
- apply basic math skills to the solution of personal and business applications.
- use common mathematics formulas to solve a variety of personal and business mathematics problems.

- use tables to compute calculations related to financial issues.
- calculate gross pay under a variety of payment methods.
- adjust gross pay by incorporating common deductions.

Skill Objectives

Students will:

- calculate straight-time pay.
- calculate total pay with straight-time pay and overtime pay combined.
- compute the total pay on a piecework basis.
- determine the salary per pay period.
- calculate the straight commission and determine the gross pay.
- compute the total graduated commission.
- read tables to find Federal Income tax withholdings.
- compute the state tax on a straight percent basis.
- compute the state tax on a graduated income basis.
- compute the amount of income withheld for Social Security and Medicare taxes.
- calculate the deduction for group insurance.
- calculate the net pay per period.

Sample Assessment

Job search and pay structure project

Pacing

6.5 weeks

Unit 3: Budgeting

Math Standards

Numerical and Proportional Reasoning – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.

2.1 Students should understand that a variety of numerical representations can be used to describe quantitative relationships.

Core

2.1a Students should extend the understanding of number to include integers, rational numbers, and real numbers.

2.1b Students should interpret and represent large sets of numbers with the aid of technology.

2.2 Students should use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.

Core

2.2a Students should develop strategies for computation and estimation using properties of number systems to solve problems.

Working with Data: Probability and Statistics – Data can be analyzed to make informed decisions using a variety of strategies, tools and technologies.

4.1 Students should collect, organize and display data using appropriate statistical and graphical methods.

Core

4.1a Students should create the appropriate visual or graphical representation of real data.

Essential Questions

- How are quantitative relationships represented by numbers?
- How can collecting, organizing and displaying data help us analyze information and make reasonable predictions and informed decisions?

Focus Question

- How do you prepare and use a monthly budget?

Core Topic

- Monthly Budget.

Unit Objectives

Students will be able to:

- understand terminology relating to personal and business mathematics applications.
- apply basic math skills to the solution of personal and business applications.
- use and/or prepare a monthly budget.

Skill Objectives

Students will:

- compute the average monthly expenditure.
- use records of past expenditure to prepare a monthly budget sheet.
- compare amounts budgeted to actual expenditures.

Sample Assessment

Creating your own personal budget.

Pacing

3 weeks

Unit 4: Purchases (cash/credit)

Math Standards

Numerical and Proportional Reasoning – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.

2.1 Students should understand that a variety of numerical representations can be used to describe quantitative relationships.

Core

2.1a Students should extend the understanding of number to include integers, rational numbers, and real numbers.

2.1b Students should interpret and represent large sets of numbers with the aid of technology.

2.2 Students should use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.

Core

2.2a Students should develop strategies for computation and estimation using properties of number systems to solve problems.

Essential Question

- How are quantitative relationships represented by numbers?

Focus Question

- How do you calculate final sale price for various purchases?

Core Topics

- Cash Purchases
- Credit and Electronic Purchases.

Unit Objectives

Students will be able to:

- understand terminology relating to personal and business mathematics applications.
- apply basic math skills to the solution of personal and business applications.
- calculate final sale price for various purchases.

Skill Objectives

Students will:

- compute sales tax.
- calculate the total purchase price.
- calculate the unit price.
- find the better buy based on the unit price.
- calculate the final price after using a coupon or rebate.
- determine the dollar amount of a markdown.
- compute the sale price when the markdown rate is known.
- calculate a balance on a charge account.

- differentiate between charge, credit and debit cards.

Sample Assessment
Quest for Credit

Pacing
5.5 weeks

Unit 5: Loans

Math Standards

Algebraic Reasoning: Patterns And Functions – Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.

1.1 Students should understand and describe patterns and functional relationships.

Core

1.1a Students should describe relationships and make generalizations about patterns and functions.

Extended

1.1a Students should model real world situations and make generalizations about mathematical relationships using a variety of patterns and functions.

Numerical and Proportional Reasoning – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.

2.1 Students should understand that a variety of numerical representations can be used to describe quantitative relationships.

Core

2.1a Students should extend the understanding of number to include integers, rational numbers, and real numbers.

2.1b Students should interpret and represent large sets of numbers with the aid of technology.

2.2 Students should use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.

Core

2.2a Students should develop strategies for computation and estimation using properties of number systems to solve problems.

Essential Questions

- How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?
- How are quantitative relationships represented by numbers?

Focus Questions

- How are the maturity values and interest amounts of loans computed?
- How are payments to installment loans allocated and paid off?

Core Topics

- Single payment loan
- Installment loans
- Allocation of principal and interest
- Annual Percentage Rate (APR)

Unit Objectives

Students will be able to:

- understand terminology relating to personal and business mathematics applications.
- apply basic math skills to the solution of personal and business applications.
- use common mathematics formulas to solve a variety of personal and business mathematics problems.
- use tables to compute calculations related to financial issues.
- solve problems involving financial applications including interest and amortization of loans.

Skill Objectives

Students will:

- compute the maturity value and interest amount of a single payment loan.
- calculate the amount financed on an installment loan.
- figure out the monthly payment, total amount repaid, and finance charge on an installment loan.
- work out the payment to interest, payment to principal, and the new balance.
- compute the final payment when paying off a simple interest installment loan.
- use a table to find the APR.

Sample Assessment

You are a banker and will instruct someone about taking out a loan.

Pacing

3.5 weeks

Unit 6: Vehicles

Math Standards

Algebraic Reasoning: Patterns And Functions – Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.

1.1 Students should understand and describe patterns and functional relationships.
Core
1.1a Students should describe relationships and make generalizations about patterns and functions.

Numerical and Proportional Reasoning – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.

2.1 Students should understand that a variety of numerical representations can be used to describe quantitative relationships.
Core
2.1a Students should extend the understanding of number to include integers, rational numbers, and real numbers.
2.1b Students should interpret and represent large sets of numbers with the aid of technology.

2.2 Students should use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.
Core
2.2a Students should develop strategies for computation and estimation using properties of number systems to solve problems.

Essential Questions

- How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?
- How are quantitative relationships represented by numbers?

Focus Question

- How do you compute costs associated with owning and purchasing a car?

Core Topic

- Vehicle ownership costs.

Unit Objectives

Students will be able to.

- understand terminology relating to personal and business mathematics applications.
- apply basic math skills to the solution of personal and business applications.
- use common mathematics formulas to solve a variety of personal and business mathematics problems.
- use tables to compute calculations related to financial issues.

- compute costs associated with car ownership.

Skill Objectives
Students will:
- compute the sticker price of a new vehicle.
- calculate the dealer's cost of a new vehicle.
- calculate the average retail price of a used vehicle.
- use table to compute the annual premium for vehicle insurance.
- compute the total cost per mile of operating and maintaining a vehicle.
- calculate the total cost of leasing a vehicle.
- calculate the cost per mile of renting a vehicle.

Sample Assessment
Simulated purchase of a new or used car.

Pacing
3.5 weeks

Unit 7: Investments

Math Standards

Algebraic Reasoning: Patterns And Functions – Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.

1.1 Students should understand and describe patterns and functional relationships.

Core

1.1a Students should describe relationships and make generalizations about patterns and functions.

Extended

1.1a Students should model real world situations and make generalizations about mathematical relationships using a variety of patterns and functions.

Numerical and Proportional Reasoning – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.

2.1 Students should understand that a variety of numerical representations can be used to describe quantitative relationships.

Core

2.1a Students should extend the understanding of number to include integers, rational numbers, and real numbers.

2.1b Students should interpret and represent large sets of numbers with the aid of technology.

2.2 Students should use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.

Core

2.2a Students should develop strategies for computation and estimation using properties of number systems to solve problems.

Essential Questions

- How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?
- How are quantitative relationships represented by numbers?

Focus Question

- How are interest and/or yield determined for stocks, bonds, and CD's?

Core Topics

- Certificates of Deposit (CD's)
- Stock investments
- Bonds

Unit Objectives

Students will be able to:

- understand terminology relating to personal and business mathematics applications.
- apply basic math skills to the solution of personal and business applications.
- use common mathematics formulas to solve a variety of personal and business mathematics problems.
- use tables to compute calculations related to financial issues.
- calculate interest and determine annual yield of stocks, bonds and CD's.

Skill Objectives

Students will:

- use tables to compute interest on CD's.
- solve for the total cost of a stock investment.
- calculate returns from a stock sale.
- compute the annual interest and yield on a bond.

Sample Assessment

Stock Market Investments

Pacing

4 weeks

Unit 8: Insurance

Math Standards

Algebraic Reasoning: Patterns And Functions – Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.

1.1 Students should understand and describe patterns and functional relationships.
Core
1.1a Students should describe relationships and make generalizations about patterns and functions.

Numerical and Proportional Reasoning – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.

2.1 Students should understand that a variety of numerical representations can be used to describe quantitative relationships.
Core
2.1a Students should extend the understanding of number to include integers, rational numbers, and real numbers.
2.1b Students should interpret and represent large sets of numbers with the aid of technology.

2.2 Students should use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.
Core
2.2a Students should develop strategies for computation and estimation using properties of number systems to solve problems.

Essential Questions

- How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?
- How are quantitative relationships represented by numbers?

Focus Question

- How do you calculate the premiums for health and life insurance?

Core Topics

- Health insurance
- Life insurance

Unit Objectives

Students will be able to:

- understand terminology relating to personal and business mathematics applications.
- apply basic math skills to the solution of personal and business applications.
- use common mathematics formulas to solve a variety of personal and business mathematics problems.

- use tables to compute calculations related to financial issues.
- calculate the premiums for health and life insurance.

Skill Objectives

Students will:

- compute health insurance premiums.
- calculate the amount the patient pays for health care.
- utilize tables to compute the annual premium for term life insurance.
- apply table to data to compute the annual premiums for three types of life insurance.

Sample Assessment

You work for an insurance company and will explain how benefits and costs are calculated.

Pacing

2 week