Proposed Erie County Technical School
Mathematics Course

"Personal Finance and Business Calculations" Curriculum Map
Millcreek Township School District

Course Title: Personal Finance and Business Calculations

Course Description:
This course provides a basic understanding of personal and business money management to make effective consumer decisions. Students use technology, both calculators and computers, to explore and study personal applications of money management and business transactions. Topics will include wages, taxes, fringe benefits, personal banking, loans, and credit cards. Additionally, personal asset ownership, insurance, and investments will be addressed. These concepts will be integrated and reinforced through a virtual business simulation. These activities will provide a fundamental understanding of making informed personal financial decisions leading to financial independence.

Time Frame for Course: 1.0 Credit Course

Power Standards for the Course:
- Analyze and calculate gross pay and net pay, including regular and overtime wages, commission, and piece rate. (15.1.12.M)
- Assess compensation, benefit plans, incentive packages, and possible careers paths in business. (15.8.12.Q)
- Identify employee benefits and their impact on income. (15.6.8.D)
- Develop criteria to evaluate employment options. (15.6.12.D)
- Assess the purpose, source, and impact of various taxes. (15.6.12.E)
- Compare and contrast advantages and disadvantages of various options of paying for short- and long-term purchases. (15.6.8.H)
- Compare advantages and disadvantages of different financial institutions relating to saving, investing, and borrowing. (15.6.8.I)
- Explain the difference between simple and compound interest. (15.6.8.J)
- Analyze the total cost of a major purchase loan agreement using fixed and variable interest rates, calculated over time. (15.6.12.J)
- Analyze the impact of a positive or negative credit history. (15.6.12.K)
- Evaluate criteria for personal spending in relation to the economic climate. (15.6.12.F)
- Explain the difference between sales and income tax. (15.6.8.E)
- Identify strategies for personal financial management. (15.6.12.G)
- Develop a personal budget based on career choice, such as, but not limited to: Charitable contributions, Fixed/variable expenses, Gross pay, Net pay, Other income, Savings, and Taxes. (13.3.11.D)
- Examine the purpose and importance of various types of insurance (15.6.8.N)
- Compare and contrast various suppliers of insurance products and develop criteria to evaluate individual insurance needs. (15.6.12.N)
- Analyze financial decisions for major purchasing events occurring at different stages in life, systematically considering alternatives and consequences. (15.6.12.B)

- Develop financial investment plans to accommodate various economic and personal scenarios. (15.6.12.P)
- Compare and contrast various investment plans to achieve goals of liquidity, income, and growth. (15.6.12.R)
- Calculate investment growth using varying rates of return. (15.6.8.Q)
- Evaluate the benefits of a diversified investment portfolio (15.6.8.R)

Enduring Understandings for the Course:

- A decision of whether or not to pursue a particular job may be tied to the type of pay offered.
- Government required payroll taxes have a great impact on pay.
- There are both benefits and costs associated with every job.
- Actual compensation is more than net pay.
- A lower amount of taxable earnings will result in lower taxes to be paid.
- The power of interest can work for or against the consumer.
- Evaluating the specifics of loans and savings accounts is essential prior to making a commitment to one.
- Establishing a credit history impacts a person's financial health.
- Budgets are useful in making cost effective financial decisions.
- There are costs associated with ownership that are different than the costs associated with leasing/renting.
- There is a tradeoff between equity earned and maintenance costs when deciding whether to buy or lease/rent.
- Property taxes vary depending on location and value of the home.
- Depreciation will have an impact when selling an asset.
- Sales taxes have an effect on the purchase price of products.
- The type of insurance coverage purchased (property, car, life, health and disability) is a function of personal preference and finances.
- Life insurance can be used as something more than a financial benefit for your beneficiary.
- There are costs to insurance coverage beyond the cost of the premiums.
- There are many investments and both cost and risk must play a role in choosing the best one.
- Monetary benefits need to outweigh cost and risk when investing money.

Essential Questions for the Course:

- How can I use the type of pay to determine whether or not I should pursue a particular job?
- How do payroll taxes affect my take home pay?
- How can I determine the actual value of my compensation taking into account both fringe benefits and job related expenses?
- How can I lower my taxable earnings so I pay less tax?
- How can interest rates and time affect the cost of borrowing and saving?
- Why do I pay interest when I take out a loan?
- Why does the bank pay me interest when I deposit money with it?
- To what extent can the use of a credit card impact a person's financial health?
- How can I establish a positive credit history?
- How do I create an effective, accurate budget?
- What fixed and variable expenses should be included in a budget?
- How does sales tax affect the purchase price of various items?

- How can I decide whether it is better to buy an asset or rent it?
- How are property taxes amounts calculated for an individual home owner?
- How are the property tax rates determined?
- How does depreciation affect resale value?
- How can I decide the level of insurance coverage I need on something I own?
- How do I determine the correct type of coverage I need on my own person (life, health and disability insurance)?
- Why would I convert my life insurance policy to another type of coverage?
- How can I determine costs I incur beyond the cost of the premiums for my insurance coverage?
- How can I choose the correct investment for me?
- How do I calculate rates of return on investments?
- What are the costs I incur beyond the purchase price of bonds, stocks and mutual funds?

List of Unit Titles:

1. "*It's More Than Just a Paycheck*: Wages, Wage-Related Taxes, and Fringe Benefits"
2. "*It's a Balancing Act*: Personal Banking and Credit Cards"
3. "*It's Not As Easy As You Think*: Budgeting/Spending Wisely"
4. "*And Now For The Big Ticket Items*: Personal Ownership – House and Automobile"
5. "*You Can't Live Without It*: Personal Insurance"
6. "*Making Your Money Work for You:* Investments"

Unit 1: "*It's More Than Just a Paycheck*: Wages, Wage-Related Taxes, and Fringe Benefits"

Unit 1 Summary:
In order to help guide their career decisions, students will explore the various types of pay. They will compare and contrast the advantages and disadvantages of each type of pay and analyze the types of deductions, both mandatory and voluntary, which impact take-home pay. Students will apply their understanding of pay systems through problem-solving scenarios and analyze the fringe benefits and expenses related to a job to determine the true value associated with a particular job.

Suggested Time Frame: Approximately 18 Block Classes

Power Standards:

- Analyze and calculate gross pay and net pay, including regular and overtime wages, commission, and piece rate. (15.1.12.M)
- Assess compensation, benefit plans, incentive packages, and possible careers paths in business. (15.8.12.Q)
- Identify employee benefits and their impact on income. (15.6.8.D)
- Develop criteria to evaluate employment options. (15.6.12.D)
- Assess the purpose, source, and impact of various taxes. (15.6.12.E)

Enduring Understandings:

- A decision of whether or not to pursue a particular job may be tied to the type of pay offered.
- Government required payroll taxes have a great impact on pay.
- There are both benefits and costs associated with every job.
- Actual compensation is more than net pay.

- A lower amount of taxable earnings will result in lower taxes to be paid.

Essential Questions:
- How can I use the type of pay to determine whether or not I should pursue a particular job?
- How do payroll taxes affect my take home pay?
- How can I determine the actual value of my compensation taking into account both fringe benefits and job related expenses?
- How can I lower my taxable earnings so I pay less tax?

Declarative Knowledge:
Students will know…
1. The following terms: Compensation (hourly, salaried, piece-rate and various types of commissions), mandatory deductions (taxes), voluntary deductions, fringe benefits, job-related expenses, withholding allowances, taxable earnings
2. The types of pay.
3. Government required payroll taxes.
4. The differences between gross earnings, adjusted earnings, and taxable earnings.

Procedural Knowledge:
Students will be able to…
1. Calculate their potential income based on the type of pay.
2. Calculate the payroll taxes based on income level.
3. Calculate their total compensation based on all the related factors (fringe benefits and job related expenses).
4. Determine gross earnings and adjusted gross earnings and taxable earnings.
5. Calculate the amount of money owed in federal income taxes, as well as amount of refund or shortage remaining at the end of the tax year.
6. Complete a computer simulation demonstrating the comparison of multiple jobs and selecting the best one based on pay, benefits, and expenses.

Unit 2: "*It's a Balancing Act*: Personal Banking and Credit Cards"

Unit 2 Summary:
Students will explore various methods and places to store and access their money and systems they can use to borrow money when they need more than they have. They will compare and contrast types of savings accounts and the forms of interest related to each kind. To familiarize themselves with checking systems, students will participate in simulations for setting up, using, and reconciling checking accounts. As a guide to short and long-term borrowing of money, students will explore interest, non-interest, and installment loans, as well as credit cards. They will investigate the wise use, costs, and pitfalls of any type of borrowing, including both obvious and hidden finance charges associated with loans and credit cards. Finally, students will compare and contrast the advantages and disadvantages of traditional and electronic banking.

Suggested Time Frame: Approximately 18 Block Classes

Power Standards:

1. Compare and contrast advantages and disadvantages of various options of paying for short- and long-term purchases. (15.6.8.H)
2. Compare advantages and disadvantages of different financial institutions relating to saving, investing, and borrowing. (15.6.8.I)
3. Explain the difference between simple and compound interest. (15.6.8.J)
4. Analyze the total cost of a major purchase loan agreement using fixed and variable interest rates, calculated over time. (15.6.12.J)
5. Analyze the impact of a positive or negative credit history. (15.6.12.K)

Enduring Understandings:
- The power of interest can work for or against the consumer.
- Evaluating the specifics of loans and savings accounts is essential prior to making a commitment to one.
- Establishing a credit history impacts a person's financial health.

Essential Questions:
- How can interest rates and time affect the cost of borrowing and saving?
- Why do I pay interest when I take out a loan?
- Why does the bank pay me interest when I deposit money with it?
- To what extent can the use of a credit card impact a person's financial health?
- How can I establish a positive credit history?

Declarative Knowledge:
Students will know…
1. The following terms: interest, installment loan, time deposit account, bank reconciliations, electronic banking.
2. Types of loans.
3. Types of savings accounts.
4. Types of interest – paid by the individual on a loan or credit card and earned by an individual in a savings account.
5. Finance charges associated with credit cards.

Procedural Knowledge:
Students will be able to…
1. Reconcile a check register and bank statement.
2. Calculate simple and compound interest.
3. Calculate the actual cost of borrowing money.
4. Evaluate advantages and disadvantages of various savings and loan options.
5. Evaluate advantages and disadvantages of using credit cards.
6. Complete a computer simulation utilizing traditional and electronic banking.

Unit 3: "*It's Not As Easy As You Think*: Budgeting/Spending Wisely"

Unit 3 Summary:
Students will analyze both income flowing into a household or business as well as costs taking money away from the household or business. Personal budgets will be created using realistic incomes and expenses students can expect to encounter when living independently. Income taxes versus sales taxes

and their impact on purchases will be discussed. Students will utilize unit costs for comparison and effective decision making in the marketplace.

Suggested Time Frame: Approximately 18 Block Classes

Power Standards:
1. Evaluate criteria for personal spending in relation to the economic climate. (15.6.12.F)
2. Explain the difference between sales and income tax. (15.6.8.E)
3. Identify strategies for personal financial management. (15.6.12.G)
4. Develop a personal budget based on career choice, such as, but not limited to: Charitable contributions, Fixed/variable expenses, Gross pay, Net pay, Other income, Savings, and Taxes. (13.3.11.D)

Enduring Understandings:
- Sales taxes have an effect on the purchase price of products.
- Budgets are useful in making cost effective financial decisions.

Essential Questions:
- How does sales tax affect the purchase price of various items?
- How do I create an effective, accurate budget?
- What fixed and variable expenses should be included in a budget?

Declarative Knowledge:
Students will know…
1. The following terms: cash payments register, cash receipts register.
2. The process of developing a personal or business budget.
3. The impact of sales tax on purchase price.

Procedural Knowledge:
Students will be able to…
1. Create a comprehensive budget including all types of income and fixed and variable expenses.
2. Calculate unit costs and sales taxes.
3. Create cash payments and cash receipts registers.
4. Complete a computer simulation comparing and evaluating unit costs, while maintaining a budget.

Unit 4: "*And Now For The Big Ticket Items*: Personal Ownership – House and Automobile"

Unit 4 Summary:
Students will brainstorm the advantages and disadvantages of buying versus renting a house or car. In terms of purchasing, they will identify the costs associated with both borrowing to buy a house or car and the related long-term expenses of ownership, including property taxes. Students will also discuss the positive and negative aspects of depreciation of the value of their property.

Suggested Time Frame: Approximately 18 Block Classes

Power Standards:

1. Analyze financial decisions for major purchasing events occurring at different stages in life, systematically considering alternatives and consequences. (15.6.12.B)
2. Analyze the total cost of a major purchase loan agreement using fixed and variable interest rates, calculated over time. (15.6.12.J)
3. Compare and contrast advantages and disadvantages of various options of paying for short- and long-term purchases. (15.6.8.H)
4. Assess the purpose, source, and impact of various taxes. (15.6.12.E)

Enduring Understandings:

- There are costs associated with ownership that are different than the costs associated with leasing/renting.
- There is a tradeoff between equity earned and maintenance costs when deciding whether to buy or lease/rent.
- Property taxes vary depending on location and value of the home.
- Depreciation will have an impact when selling an asset.

Essential Questions:

- How can I decide whether it is better to buy an asset or rent it?
- How are property taxes amounts calculated for an individual home owner?
- How are the property tax rates determined?
- How does depreciation affect resale value?

Declarative Knowledge:

Students will know…

1. The following terms: depreciation, equity, property taxes, assessed value.
2. Typical costs associated with ownership as well as leasing/renting.
3. How equity is achieved and advantages associated with it.
4. Property taxes and how they are calculated.
5. Depreciation and how it is calculated.

Procedural Knowledge:

Students will be able to…

1. Evaluate the advantages and disadvantages of purchasing an asset.
2. Calculate cost of buying a house or car – interest and annual cost of ownership.
3. Calculate cost of leasing/renting.
4. Calculate property taxes and property tax rates.
5. Calculate depreciation.
6. Complete a computer simulation where a car is purchased and a decision is made to purchase or rent a home.

Unit 5: "*You Can't Live Without It*: Personal Insurance"

Unit 5 Summary:

Students will evaluate the different types of insurance coverage in several areas – property insurance, automobile insurance, life insurance, and health and disability insurance. Monthly and annual costs associated with insurance coverage will be research by students, as well as any additional out of pocket costs. Finally, the positive and negative aspects of maintaining various coverage levels will be explored.

Suggested Time Frame: Approximately 18 Block Classes

Power Standards:
1. Examine the purpose and importance of various types of insurance. (15.6.8.N)
2. Compare and contrast various suppliers of insurance products and develop criteria to evaluate individual insurance needs. (15.6.12.N)

Enduring Understandings:
- The type of insurance coverage purchased (property, car, life, health and disability) is a function of personal preference and finances.
- Life insurance can be used as something more than a financial benefit for your beneficiary.
- There are costs to insurance coverage beyond the cost of the premiums.

Essential Questions:
- How can I decide the level of insurance coverage I need on something I own?
- How do I determine the correct type of coverage I need on my own person (life, health and disability insurance)?
- Why would I convert my life insurance policy to another type of coverage?
- How can I determine costs I incur beyond the cost of the premiums for my insurance coverage?

Declarative Knowledge:
Students will know…
1. The following terms: premiums, whole life insurance, term insurance, 4 types of car insurance coverage (property, bodily injury, collision, comprehensive), major medical
2. Types of car insurance both optional and legally required.
3. Types of property insurance.
4. Types of life insurance and factors to consider for converting your coverage.
5. Types of health and disability insurance.

Procedural Knowledge:
Students will be able to…
1. Calculate premiums for each type of insurance
2. Calculate refunds and conversions for life insurance.
3. Compare and contrast different types of coverage to select the one that best meets your needs for each type of insurance.
4. Calculate out of pocket costs for health insurance in addition to the cost of premiums.
5. Calculate the monetary benefits if disability insurance needs to be used.
6. Determine the results when a claim is filed.

Unit 6: "*Making Your Money Work for You*: Investments"

Unit 6 Summary:

Students will appraise the different types of investments and determine the risks and costs associated with each investment. In addition, the positive and negative aspects of the different types of investments are explored. Students will also calculate rates of return for different investments.

Suggested Time Frame: Approximately 18 Block Classes

Power Standards:
1. Develop financial investment plans to accommodate various economic and personal scenarios. (15.6.12.P)
2. Compare and contrast various investment plans to achieve goals of liquidity, income, and growth. (15.6.12.R)
3. Calculate investment growth using varying rates of return. (15.6.8.Q)
4. Evaluate the benefits of a diversified investment portfolio. (15.6.8.R)

Enduring Understandings:
1. There are many investments and both cost and risk must play a role in choosing the best one.
2. Monetary benefits need to outweigh cost and risk when investing money.

Essential Questions:
1. How can I choose the correct investment for me?
2. How do I calculate rates of return on investments?
3. What are the costs I incur beyond the purchase price of bonds, stocks and mutual funds?

Declarative Knowledge:
Students will know…
1. The following terms: bonds, brokers, common and preferred stock, dividends, mutual funds, market price, offer price, net asset value.
2. Types of bonds including savings bonds.
3. Types of stock.
4. Types of mutual funds, including load versus no load funds.
5. The process for calculating the amount of rent to charge to make a profit.

Procedural Knowledge:
Students will be able to…
1. Calculate costs and risk associate with each investment type.
2. Calculate interest earned and rate of return on bonds.
3. Calculate dividends earned on stocks and profit or loss at time of sale.
4. Calculate amount of commission charged on mutual funds as well as the total investment.
5. Compare and contrast different types of investments to select the one that best meets your needs.
6. Calculate the correct amount of rent to charge to ensure a specific net income.