MATH 12 CURRICULUM

Course 17012

This course is designed to be a 12th grade Math course for students who would benefit more from a practical application of math in personal finance management and other life applications of Math rather than taking a course in advanced Math. The course covers principles of banking including checking and savings, investment options, education financing, loans, rent, mortgages, and income taxes.

MATH 12 OUTLINE:

Goals	Skills	Summative Assessments	Time Frame	Main Resources
• Students will learn the basics of savings plans. • Students will learn the basics of banking including checking accounts and the role of the Federal Reserve. • Students will gain basic understanding of debt, credit cards, and credit scores. • Students will learn the basics of money investment choices regarding rent vs a mortgage and various transportation options. • Students will gain knowledge about post-secondary school financing. • Students will learn the basic consumer protection laws in effect. • Students will learn about various investment vehicles including stocks.	• Describe best practices to use when making a financial plan/budget • Compare account types based on liquidity, minimum required balance, & interest rate Using Your Account • Evaluate different types of credit card fees and features • Explain how credit scores can have an impact on future financial decisions • Apply renting/owning considerations to specific transportation scenarios • Calculate the cost associated with different insurance policies, based on the deductible and premium amounts • List and prioritize the steps to resolve suspected consumer fraud/identity theft • Complete an end of the year tax form.	Mid-year and End of Year Benchmark Assessments,	1-year	Various sources and documents specific to the various financial scenarios.

MATH 12 MAP:

TIME FRAME	BIG IDEAS	CONCEPTS	ESSENTIAL QUESTIONS	STANDARDS	OBJECTIVES	DIFFERENTIATION	ASSESSMENT
Unit 1: Savings Weeks 1-4	• There are many advantageous ways to save and grow money.	1. Simple & compound interest 2. Budget creation & categorization 3. Savings vehicles & plans	• How does the frequency of compounding impact how your interest grows? • How can a budget help you save money? • How can different savings vehicles be a better option in one circumstance, but a worse option in another?	6.1.12.A Predict the long-term consequences of decisions made because of scarcity. 6.1.12.B Evaluate the economic reasoning behind a choice. Evaluate effective allocation of resources for the production of goods and services. 6.1.12.C Analyze the opportunity cost of decisions made by individuals, businesses, communities, and nations. 6.1.12.D Predict how changes in incentives may affect the choices made by individuals, businesses, communities, and nations. A1.1.1.5.1 Add, subtract and/or multiply polynomial expressions (express answers in simplest form – nothing larger than a binomial multiplied by a trinomial). A1.1.1.5.3 Simplify/reduce a rational algebraic expression. A2.1.2.1.1 Use exponential	Starting to Save • I. Define simple and compound interest • II. Determine the impact of interest rates and time on total interest accrued • III. Identify common savings vehicles (savings account, CDs, MMAs) • IV. Describe common features (liquidity, minimum balance, interest rate) of savings vehicles Compound Interest • V. Understand that compound interest leads to more interest over time than simple interest • VI. Describe the impact of compounding frequency on total interest accrued Budgeting Basics • VII. Describe the purpose of a budget • VIII. Describe best practices to use when making a financial plan/budget	Guided Notes for all students for each new process or concept. Reduced problem sets (if in IEP) Extended testing time (if in IEP) Small group testing (if in IEP)	Discussions Projects Homework Participation Quiz Test Presentations Binder Checks

| | | | | expressions to represent rational numbers.

A2.1.2.1.3 Simplify/evaluate expressions involving multiplying with exponents (e.g. x6 * x7 = x13), powers of powers (e.g., (x6)7=x42) and powers of products (2x2)3=8x6 (limit to rational exponents).

A2.1.2.1.4 implify or evaluate expressions involving logarithms and exponents (e.g. log28 = 3 or log42 = ½).

A2.1.2.2.2 Simplify rational algebraic expressions.

CC.2.2.HS.D.2 Write expressions in equivalent forms to solve problems. | | | |
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| Unit 2: Banking

Weeks 5-8 | • There are many advantageous ways to save, grow, and spend money. | 1. Types of Banks 2. How the Federal Reserve System works 3. Account types (checking, savings, CDs, MMAs) 4. Using an account; Writing checks | • Why do different banks exist? • Why do different types of accounts exist? | 6.1.12.A Predict the long-term consequences of decisions made because of scarcity.

6.1.12.B Evaluate the economic reasoning behind a choice. Evaluate effective allocation of resources for the production of goods and services.

6.1.12.C Analyze the opportunity cost of decisions made by individuals, businesses, communities, and nations. | The Banking System • I. Examine the different types of financial institutions • II. Understand the characteristics of different bank types (retail vs. online vs. credit union) • III. Introduce the structure & function of the Federal Reserve Choosing Your Account • IV. Understand some basic terms/features of accounts (liquidity, FDIC-insured, minimum balance) • V. Know the different types of | Guided Notes for all students for each new process or concept.

Reduced problem sets (if in IEP)

Extended testing time (if in IEP)

Small group testing (if in IEP) | Discussions

Projects

Homework

Participation

Quiz

Test

Presentations

Binder Checks |

| | | | | | 6.1.12.D
Predict how changes in incentives may affect the choices made by individuals, businesses, communities, and nations.

A1.1.1.5.3
Simplify/reduce a rational algebraic expression.

A2.1.2.1.1
Use exponential expressions to represent rational numbers.

A2.1.2.1.2
Simplify/evaluate expressions involving positive and negative exponents and/or roots (may contain all types of real numbers - exponents should not exceed power of 10).

A2.1.2.1.3
Simplify/evaluate expressions involving multiplying with exponents (e.g. x6 * x7 = x13), powers of powers (e.g., (x6)7=x42) and powers of products (2x2)3=8x6 (limit to rational exponents).

A2.1.2.1.4
Simplify or evaluate expressions involving logarithms and exponents (e.g. log28 = 3 or log42 = ½).

A2.1.2.2.2
Simplify rational algebraic expressions.

CC.2.2.HS.D.2
Write expressions in | accounts (checking, MMA, savings, CD)
• VI. Compare account types based on liquidity, minimum required balance, & interest rate Using Your Account
• VII. Identify common account fees & how they can occur
• VIII. Know the parts/function of the check
• IX. Understand how to monitor/balance your account | | |

				equivalent forms to solve problems.			
Unit 3: Payment Types Weeks 9-12	• There are many advantageous ways to spend money.	1. Payment types 2. Credit card offers, terms & billing 3. How to manage existing debt	• How can understanding credit and debt save you time and money?	6.1.12.A Predict the long-term consequences of decisions made because of scarcity. 6.1.12.B Evaluate the economic reasoning behind a choice. Evaluate effective allocation of resources for the production of goods and services. 6.1.12.C Analyze the opportunity cost of decisions made by individuals, businesses, communities, and nations. 6.1.12.D Predict how changes in incentives may affect the choices made by individuals, businesses, communities, and nations. A1.1.1.5.3 Simplify/reduce a rational algebraic expression. A2.1.2.1.1 Use exponential expressions to represent rational numbers. A2.1.2.1.3 Simplify/evaluate expressions involving multiplying with exponents (e.g. $x6 * x7 = x13$), powers of powers (e.g., $(x6)7=x42$) and powers of products $(2x2)3=8x6$ (limit to	Payment Types • I. Interpret the differences in payment types, including debit cards, credit cards, pre-paid cards, cash advances, and payday loans • II. Understand when & when not to use different payment types EverFi Financial LiteracyTM Teacher Resources Course Learning Objectives Credit Cards • III. Evaluate different types of credit card fees and features • IV. Compare credit card offers based on different scenarios Manage Your Debt • V. Understand how items purchased with credit can end up costing more • VI. Understand how paying the minimum can still lead to long-term debt repayment • VII. Use a credit card bill to answer questions about debt repayment	Guided Notes for all students for each new process or concept. Reduced problem sets (if in IEP) Extended testing time (if in IEP) Small group testing (if in IEP)	Discussions Projects Homework Participation Quiz Test Presentations Binder Checks

				rational exponents). A2.1.2.2.2 Simplify rational algebraic expressions. CC.2.2.HS.D.2 Write expressions in equivalent forms to solve problems.			
Unit 4: Credit Scores Weeks 13-16	• There are many advantageous ways to invest and spend money.	1. Credit scores & bureaus 2. Actions that raise/lower your credit score	• How does knowing what goes into a credit score help you?	6.1.12.A Predict the long-term consequences of decisions made because of scarcity. 6.1.12.B Evaluate the economic reasoning behind a choice. Evaluate effective allocation of resources for the production of goods and services. 6.1.12.C Analyze the opportunity cost of decisions made by individuals, businesses, communities, and nations. 6.1.12.D Predict how changes in incentives may affect the choices made by individuals, businesses, communities, and nations.	Introduction to Credit Scores • I. Understand the basics of credit scores and their importance • II. Identify the financial habits associated with certain credit scores What Affects Your Credit Score • III. Understand the basics behind credit score calculations • IV. Examine how financial behaviors can impact a credit score Your Credit Report • V. Understand how to request, read, and monitor your annual credit report • VI. Select the appropriate steps to monitor your credit report and fix errors • VII. Explain how credit scores can have an impact on future financial decisions	Guided Notes for all students for each new process or concept. Reduced problem sets (if in IEP) Extended testing time (if in IEP) Small group testing (if in IEP)	Discussions Projects Homework Participation Quiz Test Presentations Binder Checks
Unit 5: Higher Education Weeks 16-19	• There are many advantageous ways to invest, save, and spend money. • Investing in higher education is investing in	1. Available student loan financing options 2. FAFSA application process 3. Steps of the student loan	• Why is it important to start saving for college early? • How can understanding the FAFSA impact your student loans? •	6.1.12.A Predict the long-term consequences of decisions made because of scarcity. 6.1.12.B Evaluate the economic	Investing in Higher Education • I. Describe why higher education has a high potential return on investment (ROI) • II. Identify typical	Guided Notes for all students for each new process or concept. Reduced problem sets (if in IEP)	Discussions Projects Homework Participation

	your future.	process		reasoning behind a choice. Evaluate effective allocation of resources for the production of goods and services. 6.1.12.C Analyze the opportunity cost of decisions made by individuals, businesses, communities, and nations. 6.1.12.D Predict how changes in incentives may affect the choices made by individuals, businesses, communities, and nations. CC.1.2.11-12.G Integrate and evaluate multiple sources of information presented in different media or formats (e.g. visually, quantitatively) as well as in words in order to address a question or solve a problem. CC.1.2.11-12.J Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.	action steps that students should take on the path to higher education Paying for Higher Education • III. Identify and compare potential sources of higher education financing • IV. Describe the advantages of federal student loans • V. Compare subsidized & unsubsidized federal student loans • VI. Explain the purpose and process of filing the FAFSA form	Extended testing time (if in IEP) Small group testing (if in IEP)	Quiz Test Presentations Binder Checks

Unit 6: Renting Vs. Owning Weeks 20-24	• Some ways of investing and spending are more advantageous than others depending on your circumstances.	1. Pros/Cons of renting and owning 2. Mortgage basics 3. Transportation and housing choices	• When does owning become more advantageous than renting or leasing?	6.1.12.A Predict the long-term consequences of decisions made because of scarcity. 6.1.12.B Evaluate the economic reasoning behind a choice. Evaluate effective allocation of resources for the production of goods and services. 6.1.12.C Analyze the opportunity cost of decisions made by individuals, businesses, communities, and nations. 6.1.12.D Predict how changes in incentives may affect the choices made by individuals, businesses, communities, and nations. A1.1.1.5.3 Simplify/reduce a rational algebraic expression. A2.1.2.1.1 Use exponential expressions to represent rational numbers. A2.1.2.1.2 Simplify/evaluate expressions involving positive and negative exponents and/or roots (may contain all types of real numbers - exponents should not exceed power of 10). A2.1.2.1.3	Renting vs. Owning • I. Understand the differences between renting, leasing and owning • II. Define & provide an example of appreciating and depreciating assets Housing Choices • III. Explain the advantages and disadvantages of renting/owning a home • IV. Apply renting/owning considerations to specific housing scenarios • V. Define important housing terminology (mortgage, down payment) • VI. Identify components of a standard housing lease agreement Transportation Choices • VII. Explain the advantages and disadvantages of leasing/owning a car • VIII. Apply renting/owning considerations to specific transportation scenarios • IX. Examine the explicit and implicit costs of buying a car	Guided Notes for all students for each new process or concept. Reduced problem sets (if in IEP) Extended testing time (if in IEP) Small group testing (if in IEP)	Discussions Projects Homework Participation Quiz Test Presentations Binder Checks

				Simplify/evaluate expressions involving multiplying with exponents (e.g. x6 * x7 = x13), powers of powers (e.g., (x6)7=x42) and powers of products (2x2)3=8x6 (limit to rational exponents). A2.1.2.1.4 Simplify or evaluate expressions involving logarithms and exponents (e.g. log28 = 3 or log42 = ½). A2.1.2.2.2 Simplify rational algebraic expressions. CC.2.2.HS.D.2 Write expressions in equivalent forms to solve problems.			
Unit 7: Insurance & Taxes Weeks 25-29	• There are advantageous ways to report the money you've earned, invested, and spent.	1. Tax Forms – W-2, W-4, 1040EZ 2. Types of insurance 3. Insurance out-of-pocket costs	• For what reason might people need different tax forms? • How can investing in insurance save you money?	6.1.12.A Predict the long-term consequences of decisions made because of scarcity. 6.1.12.B Evaluate the economic reasoning behind a choice. Evaluate effective allocation of resources for the production of goods and services. 6.1.12.C Analyze the opportunity cost of decisions made by individuals, businesses, communities, and nations. 6.1.12.D Predict how changes in incentives may affect the choices made by	Insurance • I. Recognize that the primary purpose of insurance is to mitigate risk • II. Describe the coverage provided by different insurance types (ex. auto, renters, homeowners, health, disability, and life insurance) • III. Define common terminology associated with insurance policies (ex. deductible, premium, copay, claim, coverage, policy) • IV. Calculate the cost associated with different insurance policies, based on the deductible and	Guided Notes for all students for each new process or concept. Reduced problem sets (if in IEP) Extended testing time (if in IEP) Small group testing (if in IEP)	Discussions Projects Homework Participation Quiz Test Presentations Binder Checks

				individuals, businesses, communities, and nations. CC.1.2.11-12.B.b Answer an inferential question about a text CC.1.2.11-12.G Integrate and evaluate multiple sources of information presented in different media or formats (e.g. visually, quantitatively) as well as in words in order to address a question or solve a problem. CC.1.2.11-12.J Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. CC.1.2.11-12.K Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade-level reading and content, choosing flexibly from a range of strategies and tools.	premium amounts • V. Explain how insurance companies evaluate policies based on individual risk Taxes • VI. Identify and explain the purpose of common taxes (ex. property, sales, capital gains, state/federal income tax) • VII. Use components of a paystub to answer questions about income and taxation • VIII. Identify taxes and other deductions that appear on a typical paystub • IX. Identify and explain the purpose of common tax forms (ex. W-2, W-4, and 1040-EZ) • X. Practice completing end-of-year tax forms		
Unit 8: Consumer Protection Weeks 30-	• It's important to stay safe when investing and spending money.	1. Consumer protection laws & organizations 2. How to recognize,	• What role does common sense play in protecting yourself against	6.1.12.A Predict the long-term consequences of decisions made because of scarcity.	Consumer Protection • I. Identify strategies that can be used to steal your identity or	Guided Notes for all students for each new process or concept.	Discussions Projects Homework

32		protect & resolve identity theft	identity theft? • What help is available when protecting yourself against identity theft?	6.1.12.B Evaluate the economic reasoning behind a choice. Evaluate effective allocation of resources for the production of goods and services. 6.1.12.C Analyze the opportunity cost of decisions made by individuals, businesses, communities, and nations. 6.1.12.D Predict how changes in incentives may affect the choices made by individuals, businesses, communities, and nations.	commit consumer fraud • II. Identify ways your personal information can be used by identity thieves • III. Recommend ways to protect personal information • IV. Describe ways to identify whether identity theft or consumer fraud has occurred • V. Explain the purpose of consumer protection laws and organizations Identity Protection • VI. Categorize personal information or documents as sensitive or not sensitive • VII. Assess when personal information should be provided • VIII. List and prioritize the steps to resolve suspected consumer fraud/identity theft	Reduced problem sets (if in IEP) Extended testing time (if in IEP) Small group testing (if in IEP)	Participation Quiz Test Presentations Binder Checks
Unit 9: Investing Weeks 33-36	• There are many advantageous ways to invest money.	1. How stocks, bonds, and mutual funds work 2. Importance of diversification 3. Understanding stock exchanges and tickers	• Why are there different classifications for investment accounts? • How can your investment accounts change and grow as you earn money?	6.1.12.A Predict the long-term consequences of decisions made because of scarcity. 6.1.12.B Evaluate the economic reasoning behind a choice. Evaluate effective allocation of resources for the production of goods and	• Investing in Your Future • I. Understand that re-investment and time can increase compounding returns • II. Compare and contrast different retirement plan options (401k, 403b, IRAs) • III. Describe how	Guided Notes for all students for each new process or concept. Reduced problem sets (if in IEP) Extended testing time (if in IEP) Small group testing (if in IEP)	Discussions Projects Homework Participation Quiz Test Presentations

				services.	starting to save early can impact retirement savings Basics of Investing • IV. Describe the differences between key investing options (stocks, bonds, mutual funds, index funds) • V. Explain why companies/governments typically issue stocks & bonds • VI. Examine the trade-off between risk and return with investments		Binder Checks
				6.1.12.C Analyze the opportunity cost of decisions made by individuals, businesses, communities, and nations. 6.1.12.D Predict how changes in incentives may affect the choices made by individuals, businesses, communities, and nations.			