

Instructional Focus Document

Grade 8 Mathematics

TITLE : Unit 11: Financial Planning

SUGGESTED DURATION : 5 days

UNIT OVERVIEW

Introduction

This unit bundles student expectations that address repaying a loan and the cost of credit, investing money, comparing simple and compound interest, analyzing different payment methods, studying financial responsibility, and estimating the cost of a college education. According to the Texas Education Agency, mathematical process standards including application, a problem-solving model, tools and techniques, communication, representations, relationships, and justifications should be integrated (when applicable) with content knowledge and skills so that students are prepared to use mathematics in everyday life, society, and the workplace. The introduction to the grade level standards state, "While the use of all types of technology is important, the emphasis on algebra readiness skills necessitates the implementation of graphing technology." Additionally, the availability of graphing technology is required during STAAR testing.

Prior to this Unit

In Grade 7, students calculated sales tax and income tax, identified components of a personal budget and the income needed to satisfy that budget, created a financial assets and liabilities record, calculated and compared simple and compound interest, and analyzed and compared monetary incentives, including sales, rebates, and coupons. In Grade 8 Unit 03, students studied the cost of credit, calculated the cost of repaying a loan, and calculated and compared simple and compound interest.

During this Unit

Students extend their understanding of percent and formulas to compare interest rates, including simple and compound interest, and loan lengths. Students investigate the effect of the cost of credit and the total cost of repaying that credit, whether it be with credit cards or loans. They also use an online calculator to compare different payment methods. Students compare the advantages and disadvantages of various payment methods and analyze situations that constitute financial responsibility and irresponsibility. Lastly, students estimate the cost of attending a two-year and four-year college and devise a savings plan to pay for the total estimated costs for at least the first year of attendance.

Other considerations: Reference the [Mathematics Grade 8 Instructional Considerations to Activate Purposeful Planning \(ICAPP\) Resource](#).

After this Unit

Students will further use their knowledge of financial literacy to successfully complete courses in economics and devise plans for education and financial responsibility beyond high school.

Additional Notes

In Grade 8, calculating and comparing simple interest and compound interest earnings is identified as STAAR Readiness Standard 8.12D. Solving real-world problems that compare how interest rate and loan length affect the cost of credit, explaining how small amounts of money invested regularly, including money saved for college and retirement, grow over time, and estimating the cost of a two-year and four-year college education, including family contribution, and devising a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance for at least the first year of college are identified as STAAR Supporting Standards 8.12A, 8.12C, and 8.12G. These standards are subsumed under the Grade 8 STAAR Reporting Category 4: Data Analysis and Personal Financial Literacy. Calculating the total cost of repaying a loan, including credit cards and easy access loans, under various rates of interest and over different periods using an online calculator, identifying and explaining the

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advantages and disadvantages of different payment methods, and analyzing situations to determine if they represent financially responsible decisions and identifying the benefits of financial responsibility and the costs of financial irresponsibility are identified as STAAR Standards 8.12B, 8.12E, and 8.12F. These standards are neither Supporting nor Readiness, but are foundational to the conceptual understanding of financial literacy. All of the standards in this unit are part of the Grade 8 *Texas Response to Curriculum Focal Points* (TxRCFP): Financial literacy. This unit is supporting the development of the *Texas College and Career Readiness Standards* (TxCCRS): I. Numeric Reasoning A1, B1; II. Algebraic Reasoning A1, D1, D2; V. Statistical Reasoning A1, C2; VII. Problem Solving and Reasoning A1, A2, A3, A4, A5, B1, C1, D1, D2; VIII. Communication and Representation A1, A2, A3, B1, B2, C1, C2, C3; IX. Connections A1, A2, B1, B2, B3.

Research

According to the Organization for Economic Co-operation and Development (2006), “Financial education [programs] should focus particularly on important life-planning aspects, such as basic savings, debt, insurance or pensions” (p. 3). Ben S. Bernanke (2008) who served as Chairman of the Board of Governors of the Federal Reserve System from February, 2006 until January, 2014 was quoted in his speech at a joint news conference as saying, “The financial preparedness of our nation’s youth is essential to their well-being and of vital importance to our economic future. In light of the problems that have arisen in the subprime mortgage market, we are reminded of how critically important it is for individuals to become financially literate at an early age so that they are better prepared to make decisions and navigate an increasingly complex financial marketplace. Choosing a credit card, saving for retirement or for a child’s education, or buying a home now requires more financial savvy than ever before. Financial literacy and consumer education--coupled with robust consumer protection--makes the financial marketplace effective and efficient, and better equips consumers to make tough yet smart financial decisions.”

Bernanke, C. B. (2008, April 9). *News and Events; Testimony and Speeches*. Retrieved from Board of Governors of the Federal Reserve System:

<http://www.federalreserve.gov/newsevents/speech/bernanke20080409a.htm>

Organization for Economic Co-operation and Development (2006). *Policy brief: Recommendation on principles and good practices for financial education and awareness*.

Retrieved from <http://www.oecd.org/finance/financial-education/37087833.pdf>

Texas Education Agency & Texas Higher Education Coordinating Board. (2009). *Texas college and career readiness standards*. Retrieved from

<http://www.thecb.state.tx.us/institutional-resources-programs/public-community-technical-state-colleges/texas-college-and-career-readiness-standards/>

Texas Education Agency. (2013). *Texas response to curriculum focal points for kindergarten through grade 8 mathematics*. Retrieved from

<https://www.texasgateway.org/resource/txrcfp-texas-response-curriculum-focal-points-k-8-mathematics-revised-2013>

OVERARCHING UNDERSTANDINGS AND QUESTIONS

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Financial and economic knowledge leads to informed and rational decisions allowing for effective management of financial resources when planning for a lifetime of financial security.

- Why is financial stability important in everyday life?
- What economic and financial knowledge is critical for planning for a lifetime of financial security?
- How can mapping one's financial future lead to significant short and long-term benefits?
- How can current financial and economic factors in everyday life impact daily decisions and future opportunities?

UNIT UNDERSTANDINGS AND QUESTIONS	OVERARCHING CONCEPTS AND UNIT CONCEPTS	PERFORMANCE ASSESSMENT(S)
<p>Understanding interest rates, loan lengths, loan repayments, investments, interest, payment methods, financial decisions, and financial planning for college helps one make informed financial management decisions, which promotes a more secured financial future.</p> <ul style="list-style-type: none"> • How does interest rate on a ... <ul style="list-style-type: none"> ◊ loan affect the total cost of the loan? ◊ savings account or investment affect the balance? • How does understanding interest rate and loan length affect the cost of credit promote a more secured financial future? • How does the interest rate and the length of time it takes to pay off a loan or money borrowed on credit affect the ... <ul style="list-style-type: none"> ◊ monthly payment? ◊ total cost of the loan? • What is the purpose of different types of loans and how do they differ in repayment expectations? 	<p>Personal Financial Literacy</p> <ul style="list-style-type: none"> • College <ul style="list-style-type: none"> • Cost • Payment options • Savings plans • Credit • Credit cards • Emergencies • Expenses <ul style="list-style-type: none"> • Fixed • Variable • Financial Responsibility • Interest <ul style="list-style-type: none"> • Simple • Compound • Investments • Loans and Loan Rates • Payment Methods 	<div data-bbox="1391 746 2085 855"> <p>Mathematics Grade 8 Unit 11 PA 01 Click on the PA title to view related rubric.</p> </div> <p><i>Provide access to an online interest calculator or the Internet.</i></p> <p>Analyze the problem situation(s) described below. Organize and record your work for each of the following tasks. Using precise mathematical language, justify and explain each solution process.</p> <ol style="list-style-type: none"> 1. Amy has four years before she graduates from high school, so she has begun planning for college. Amy plans to graduate from a four-year university. She wants to compare the cost of spending the first two years of college at a local two-year community college and finishing the last two years at a state university to attending all four years at a state university.

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UNIT UNDERSTANDINGS AND QUESTIONS	OVERARCHING CONCEPTS AND UNIT CONCEPTS	PERFORMANCE ASSESSMENT(S)																					
<ul style="list-style-type: none"> How can an online calculator be used to ... <ul style="list-style-type: none"> compare various interest rates? compare various lengths of time for loans? How does understanding loans and the repayment of loans promote a more secured financial future? What is the long-term effect of small amounts of money invested regularly over time? How does the length of time money stays in a savings account or investment affect the balance? What are some various savings options for college and/or retirement and what are their benefits? Why would investing a small amount of money over time be more favorable than investing one lump sum for college and/or retirement? What factors must be considered when estimating the school related costs of a two-year or four-year college education? What is the effect on the total cost of a college education if an individual selects a(n) ... <ul style="list-style-type: none"> in-state college versus an out-of-state college? public versus private college? What are the benefits of a periodic savings plan to pay for college? What is the process to devise a periodic savings plan, with and without family contributions, to accumulate money needed to pay for the cost of attending the first 	<ul style="list-style-type: none"> Retirement Savings <p><u>Associated Mathematical Processes</u></p> <ul style="list-style-type: none"> Application Problem Solving Model Tools and Techniques Communication Representations Relationships Justification 	<p style="text-align: center;">Estimated Annual Costs and Contributions</p> <table border="1" data-bbox="1462 454 2058 730"> <thead> <tr> <th></th><th>Community College</th><th>State University</th></tr> </thead> <tbody> <tr> <td>Tuition and Fees</td><td>\$1,900</td><td>\$8,108</td></tr> <tr> <td>Books and Supplies</td><td>\$892</td><td>\$1,207</td></tr> <tr> <td>Room and Board</td><td>\$0</td><td>\$8,772</td></tr> <tr> <td>Transportation</td><td>\$1,741</td><td>\$550</td></tr> <tr> <td>Other Costs</td><td>\$2,066</td><td>\$1,800</td></tr> <tr> <td>Family Contribution</td><td>\$1,500</td><td>\$1,500</td></tr> </tbody> </table> <ol style="list-style-type: none"> Estimate and compare the costs of each scenario using the information provided in the table. For each scenario, devise a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance. <ol style="list-style-type: none"> Amy's aunt opened a college savings account for her and regularly deposits \$150 each month. <ol style="list-style-type: none"> Explain how the number of years and amount Amy's aunt regularly deposit affects the total amount of money invested for her college education. Amy was gifted \$20,000 to use towards her education when she was a young child. This gift was placed in a college savings account that will pay 2.3% interest upon withdrawal. Amy's parents 		Community College	State University	Tuition and Fees	\$1,900	\$8,108	Books and Supplies	\$892	\$1,207	Room and Board	\$0	\$8,772	Transportation	\$1,741	\$550	Other Costs	\$2,066	\$1,800	Family Contribution	\$1,500	\$1,500
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UNIT UNDERSTANDINGS AND QUESTIONS	OVERARCHING CONCEPTS AND UNIT CONCEPTS	PERFORMANCE ASSESSMENT(S)
<p>year of college?</p> <ul style="list-style-type: none"> • How does understanding planning for college promote a more secured financial future? • What is the process for determining ... <ul style="list-style-type: none"> ◊ simple interest? ◊ compound interest? • How does the equation for simple interest differ from the equation of compound interest? • How does understanding interest rates promote a more secured financial future? • What are the different methods of paying for goods and services? • What are the advantages and disadvantages of the various payment methods? • How does understanding the advantages and disadvantages of different payment methods promote a more secured financial future? • What type of situation would a check/credit card/debit card/electronic payment be appropriate as a payment method? • What types of situations demonstrate financial ... <ul style="list-style-type: none"> ◊ responsibility? ◊ irresponsibility? • What are the rewards of financial responsibility? 		<p>placed \$20,000 into another college savings account for her that pays 1.7% compounded annually.</p> <ul style="list-style-type: none"> a. Calculate and compare the simple interest and compound interest earnings in both college savings accounts after 10 years. <p>4. Amy knows that she will eventually need to take out a student loan to pay for her tuition and expenses. The school offers tuition loans that Amy can repay in 5 years at an interest rate of 4.95% or in 7 years at an interest rate of 6.15%. Both loans are compounded annually.</p> <ul style="list-style-type: none"> a. Use an online interest calculator to calculate the total cost of repaying \$8,500 in student loans under both options. b. Compare the costs of repaying the \$8,500 loan under both options and describe how the interest rate and loan length affect the cost of credit. <p>5. While at college, Amy will use a debit card for everyday expenses and a credit card for emergency expenses.</p> <ul style="list-style-type: none"> a. Explain the advantages and disadvantages of these payment methods.

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UNIT UNDERSTANDINGS AND QUESTIONS	OVERARCHING CONCEPTS AND UNIT CONCEPTS	PERFORMANCE ASSESSMENT(S)
<ul style="list-style-type: none"> What are the consequences of financial irresponsibility? How does understanding responsible decisions promote a more secured financial future? 		<p>b. Amy uses a credit card to pay for her lunches for a month instead of using her debit card. Determine and explain if this represents a financially responsible decision.</p> <p>Standard(s): 8.1A, 8.1B, 8.1C, 8.1D, 8.1E, 8.1F, 8.1G, 8.12A, 8.12B, 8.12C, 8.12D, 8.12E, 8.12F, 8.12G, ELPS.c.1A, ELPS.c.1C, ELPS.c.1E, ELPS.c.2D, ELPS.c.3B, ELPS.c.4G, ELPS.c.4K, ELPS.c.5C, ELPS.c.5D, ELPS.c.5G</p>



MISCONCEPTIONS / UNDERDEVELOPED CONCEPTS

Underdeveloped Concepts:

- Some students may not realize that debit cards and credit cards are not the same.
- Students may confuse simple and compound interest.

UNIT VOCABULARY

- 401(k)** – a set amount of money, or percentage of pay, that is set aside from an employee's pay check by their employer, before the employee's wages are taxed. The employer may or may not contribute as well to the employee's 401(k) fund depending on employer's policy. The money is taxed when it is withdrawn at retirement age. In addition, if withdrawn prior to retirement age, an additional penalty tax is assessed.
- 403(b)** – a set amount of money, or percentage of pay, that is set aside from an employee's pay check by their employer, before the employee's wages are taxed. The

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money is taxed when it is withdrawn at retirement age. In addition, if withdrawn prior to retirement age, an additional penalty tax is assessed.

- **529 account** – educational savings account managed by the state, and is usually tax-deferred
- **Annual percentage rate (APR)** – annual percentage rate applied to the balance on a loan compounded monthly
- **Annuity** – deductible and non-deductible contributions may be made, taxes may be waived if used for higher education
- **Car title loan** – a high-interest, short term loan of cash for which an automobile title is required as collateral
- **Check** – a written document telling the financial institution to pay a specific amount of money from your account to a specific person or organization
- **Collateral** – something which is pledged to secure repayment of a loan; in the event of default on the loan, the collateral is forfeited
- **Compound interest for a loan** – interest that is calculated on the latest balance, including all compounded interest that has been added to the original loan principal
- **Compound interest for an investment** – interest that is calculated on the latest balance, including all compounded interest that has been added to the original principal investment
- **Credit** – buying or obtaining goods or services now with an agreement to pay in the future
- **Credit card** – a card that can be used to borrow money from financial institutions, stores, or other businesses in order to buy products and services on credit
- **Debit card** – a bankcard issued by a financial institution that is electronically linked to an individual's checking account for the purpose of making banking transactions, making payments for services, and/or making purchases
- **Electronic payment (e-payment)** – payments using security features on the Internet
- **Individual retirement account (IRA)** – a set amount of money, or percentage of pay, that is invested by an individual with a bank, mutual fund, or brokerage.
- **Inflation** – the general increase in prices and decrease in the purchasing value of money
- **Payday loan** – a high-interest, short term loan that is repaid when the borrower receives their next paycheck
- **Principal of a loan** – the original amount borrowed
- **Principal of an investment** – the original amount invested
- **Retirement savings** – optional savings plans or accounts to which the employer can make direct deposits of an amount deducted from the employee's pay at the request of the employee
- **Savings account** – a bank or credit union account in which the money deposited earns interest so there will be more money in the future than originally deposited
- **Simple interest for a loan** – interest that is calculated only on the principal amount of the loan
- **Simple interest for an investment** – interest paid on the original principal in an account, disregarding any previously earned interest
- **Social Security** – a percentage of an employee's pay required by law that the employer withholds from the employee's pay for social security savings which is deposited into the federal retirement system; payment toward that employee's eventual retirement; the employer also is required to pay a matching amount for the employee into the federal retirement system.
- **Stored-value card** – a prepaid card that functions similar to a credit card or debit card
- **Taxable investment account** – many companies will create an investment portfolio with the specific purpose of saving and building a strong portfolio to be used to pay for college
- **Traditional savings account** – money put into a savings account much like paying a monthly expense such as a light bill or phone bill

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- **U.S. savings bond** – money saved for a specific length of time and guaranteed by the federal government

Related Vocabulary:

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> • Debit • Deductible • Deferred • Deposit • Direct deposit • Graduate student | <ul style="list-style-type: none"> • Interest • Invest • Investment • Loan • Non-deductible | <ul style="list-style-type: none"> • Rate • Term • Title • Undergraduate student • Withdrawal |
|--|--|--|

UNIT ASSESSMENT ITEMS	SYSTEM RESOURCES	OTHER RESOURCES
<p>Unit Assessment Items that have been published by your district may be accessed through Search All Components in the District Resources tab.</p> <p>Assessment items may also be found using the Assessment Center if your district has granted access to that tool.</p>	<p>Mathematics Concepts Charts</p> <p>Mathematics Grade 8 Backward Design Document</p> <p>Mathematics Grade 8 Enhanced TEKS Clarification</p> <p>Mathematics Grade 8 Focal Points with Aligned Standards and TEKS Introduction</p> <p>Mathematics Grade 8 Instructional Considerations to Activate Purposeful Planning (ICAPP)</p> <p>Mathematics Grade 8 STAAR Analysis Resources</p> <p>Mathematics Grade 8 STAAR Blueprint and Item Percentages</p> <p>Mathematics Grade 8 STAAR Enhanced Blueprint</p>	<p>Texas Higher Education Coordinating Board – Texas College and Career Readiness Standards</p> <p>Texas Education Agency – Texas Response to Curriculum Focal Points for K-8 Mathematics Revised 2013</p> <p>Texas Education Agency – Mathematics Curriculum</p> <p>Texas Education Agency – STAAR Mathematics Resources</p> <p>Texas Education Agency Texas Gateway – Revised Mathematics TEKS: Vertical Alignment Charts</p> <p>Texas Education Agency Texas Gateway – Mathematics TEKS: Supporting Information</p>

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[Mathematics Grade 8 Vertical Alignment](#)

[Mathematics Grade 8_Unit 11_TEKS Resource System STAAR Analysis](#)

[Mathematics K-HS Overarching Understandings and Questions](#)

[Mathematics Long Term Transfer Goals](#)

[Mathematics Suggested Basic Manipulatives by Grade Level](#)

[Mathematics Suggested Engaging Literature](#)

[Mathematics Teacher Manipulative Google Slide Decks](#)

[Mathematics Texas Education Agency Grade 8 TEKS Supporting Information \(with TEKS Resource System Comments\)](#)

[Mathematics Vertical Quick Guide](#)

Texas Education Agency Texas Gateway – [Interactive Mathematics Glossary](#)

Texas Education Agency Texas Gateway – [Resources Aligned to Grade 8 Mathematics TEKS](#)

Texas Instruments – [Graphing Calculator Tutorials](#)

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TAUGHT DIRECTLY TEKS		
TEKS INTENDED TO BE EXPLICITLY TAUGHT IN THIS UNIT.		
<p><u>TEKS/SE Legend:</u></p> <ul style="list-style-type: none"> • Knowledge and Skills Statements (TEKS) identified by TEA are in italicized, bolded, black text. • Student Expectations (TEKS) identified by TEA are in bolded, black text. • Student Expectations (TEKS) are labeled Readiness as identified by TEA of the assessed curriculum. • Student Expectations (TEKS) are labeled Supporting as identified by TEA of the assessed curriculum. • Student Expectations (TEKS) are labeled Process standards as identified by TEA of the assessed curriculum. • Portions of the Student Expectations (TEKS) that are not included in this unit but are taught in previous or future units are indicated by a strike-through. 		<p><u>Specificity Legend:</u></p> <ul style="list-style-type: none"> • Supporting information / clarifications (specificity) written by TEKS Resource System are in blue text. • <i>Unit-specific clarifications are in italicized, blue text.</i> • Information from Texas Education Agency (TEA), Texas College and Career Readiness Standards (TxCCRS), Texas Response to Curriculum Focal Points (TxRCFP) is labeled. • A Partial Specificity label indicates that a portion of the specificity not aligned to this unit has been removed.
TEKS# SE#	TEKS	SPECIFICITY
8.1	Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	
8.1A	Apply mathematics to problems arising in everyday life, society, and the workplace. Process Standard	Apply MATHEMATICS TO PROBLEMS ARISING IN EVERYDAY LIFE, SOCIETY, AND THE WORKPLACE

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TEKS# SE#	TEKS	SPECIFICITY
		<p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Mathematical problem situations within and between disciplines <ul style="list-style-type: none"> ◊ Everyday life ◊ Society ◊ Workplace <p>Note(s):</p> <ul style="list-style-type: none"> • The mathematical process standards may be applied to all content standards as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Representing, applying, and analyzing proportional relationships ◊ Using expressions and equations to describe relationships, including the Pythagorean Theorem ◊ Making inferences from data • TxCCRS: <ul style="list-style-type: none"> ◊ VII.D. Problem Solving and Reasoning – Real-world problem solving <ul style="list-style-type: none"> • VII.D.1. Interpret results of the mathematical problem in terms of the original real-world situation. ◊ IX.A. Connections – Connections among the strands of mathematics <ul style="list-style-type: none"> • IX.A.1. Connect and use multiple key concepts of mathematics in situations and problems. • IX.A.2. Connect mathematics to the study of other disciplines. ◊ IX.B. Connections – Connections of mathematics to nature, real-world situations, and everyday life <ul style="list-style-type: none"> • IX.B.1. Use multiple representations to demonstrate links between mathematical and real-world situations. • IX.B.2. Understand and use appropriate mathematical models in the natural, physical, and social sciences.

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TEKS# SE#	TEKS	SPECIFICITY
		<ul style="list-style-type: none"> IX.B.3. Know and understand the use of mathematics in a variety of careers and professions.
8.1B	<p>Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.</p> <p><i>Process Standard</i></p>	<p>Use</p> <p>A PROBLEM-SOLVING MODEL THAT INCORPORATES ANALYZING GIVEN INFORMATION, FORMULATING A PLAN OR STRATEGY, DETERMINING A SOLUTION, JUSTIFYING THE SOLUTION, AND EVALUATING THE PROBLEM-SOLVING PROCESS AND THE REASONABLENESS OF THE SOLUTION</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> Problem-solving model <ul style="list-style-type: none"> Analyze given information Formulate a plan or strategy Determine a solution Justify the solution Evaluate the problem-solving process and the reasonableness of the solution <p>Note(s):</p> <ul style="list-style-type: none"> The mathematical process standards may be applied to all content standards as appropriate. TxRCFP: <ul style="list-style-type: none"> Representing, applying, and analyzing proportional relationships Using expressions and equations to describe relationships, including the Pythagorean Theorem Making inferences from data TxCCRS: <ul style="list-style-type: none"> I.B. Numeric Reasoning – Number sense and number concepts

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TEKS# SE#	TEKS	SPECIFICITY
		<ul style="list-style-type: none"> • I.B.1. Use estimation to check for errors and reasonableness of solutions. ◊ V.A. Statistical Reasoning – Design a study <ul style="list-style-type: none"> • V.A.1. Formulate a statistical question, plan an investigation, and collect data. ◊ VII.A. Problem Solving and Reasoning – Mathematical problem solving <ul style="list-style-type: none"> • VII.A.1. Analyze given information. • VII.A.2. Formulate a plan or strategy. • VII.A.3. Determine a solution. • VII.A.4. Justify the solution. • VII.A.5. Evaluate the problem-solving process. ◊ VII.D. Problem Solving and Reasoning – Real-world problem solving <ul style="list-style-type: none"> • VII.D.2. Evaluate the problem-solving process.
8.1C	<p>Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.</p> <p><i>Process Standard</i></p>	<div style="text-align: right;">Partial Specificity</div> <p>Select</p> <p>TOOLS, INCLUDING PAPER AND PENCIL AND TECHNOLOGY AS APPROPRIATE, AND TECHNIQUES, INCLUDING MENTAL MATH, ESTIMATION, AND NUMBER SENSE AS APPROPRIATE, TO SOLVE PROBLEMS</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Appropriate selection of tool(s) and techniques to apply in order to solve problems <ul style="list-style-type: none"> ◊ Tools <ul style="list-style-type: none"> • Paper and pencil • Technology ◊ Techniques <ul style="list-style-type: none"> • Mental math • Estimation • Number sense

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		<p>Note(s):</p> <ul style="list-style-type: none"> • The mathematical process standards may be applied to all content standards as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Representing, applying, and analyzing proportional relationships ◊ Using expressions and equations to describe relationships, including the Pythagorean Theorem ◊ Making inferences from data • TxCCRS: <ul style="list-style-type: none"> ◊ I.B. Numeric Reasoning – Number sense and number concepts <ul style="list-style-type: none"> • I.B.1. Use estimation to check for errors and reasonableness of solutions. ◊ V.C. Statistical Reasoning – Analyze, interpret, and draw conclusions from data <ul style="list-style-type: none"> • V.C.2. Analyze relationships between paired data using spreadsheets, graphing calculators, or statistical software.
8.1D	<p>Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.</p> <p><i>Process Standard</i></p>	<p>Communicate</p> <p>MATHEMATICAL IDEAS, REASONING, AND THEIR IMPLICATIONS USING MULTIPLE REPRESENTATIONS, INCLUDING SYMBOLS, DIAGRAMS, GRAPHS, AND LANGUAGE AS APPROPRIATE</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Mathematical ideas, reasoning, and their implications <ul style="list-style-type: none"> ◊ Multiple representations, as appropriate <ul style="list-style-type: none"> • Symbols • Diagrams • Graphs • Language

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SUGGESTED DURATION : 5 days

TEKS# SE#	TEKS	SPECIFICITY
		<p>Note(s):</p> <ul style="list-style-type: none"> • The mathematical process standards may be applied to all content standards as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Representing, applying, and analyzing proportional relationships ◊ Using expressions and equations to describe relationships, including the Pythagorean Theorem ◊ Making inferences from data • TxCCRS: <ul style="list-style-type: none"> ◊ II.D. Algebraic Reasoning – Representing relationships <ul style="list-style-type: none"> • II.D.1. Interpret multiple representations of equations, inequalities, and relationships. • II.D.2. Convert among multiple representations of equations, inequalities, and relationships. ◊ VIII.A. Communication and Representation – Language, terms, and symbols of mathematics <ul style="list-style-type: none"> • VIII.A.1. Use mathematical symbols, terminology, and notation to represent given and unknown information in a problem. • VIII.A.2. Use mathematical language to represent and communicate the mathematical concepts in a problem. • VIII.A.3. Use mathematical language for reasoning, problem solving, making connections, and generalizing. ◊ VIII.B. Communication and Representation – Interpretation of mathematical work <ul style="list-style-type: none"> • VIII.B.1. Model and interpret mathematical ideas and concepts using multiple representations. • VIII.B.2. Summarize and interpret mathematical information provided orally, visually, or in written form within the given context. ◊ VIII.C. Communication and Representation – Presentation and representation of mathematical work

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		<ul style="list-style-type: none"> • VIII.C.1. Communicate mathematical ideas, reasoning, and their implications using symbols, diagrams, models, graphs, and words. • VIII.C.2. Create and use representations to organize, record, and communicate mathematical ideas. • VIII.C.3. Explain, display, or justify mathematical ideas and arguments using precise mathematical language in written or oral communications. ◊ IX.B. Connections – Connections of mathematics to nature, real-world situations, and everyday life <ul style="list-style-type: none"> • IX.B.1. Use multiple representations to demonstrate links between mathematical and real-world situations.
8.1E	<p>Create and use representations to organize, record, and communicate mathematical ideas. <i>Process Standard</i></p>	<p>Create, Use</p> <p>REPRESENTATIONS TO ORGANIZE, RECORD, AND COMMUNICATE MATHEMATICAL IDEAS</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Representations of mathematical ideas <ul style="list-style-type: none"> ◊ Organize ◊ Record ◊ Communicate • Evaluation of the effectiveness of representations to ensure clarity of mathematical ideas being communicated • Appropriate mathematical vocabulary and phrasing when communicating mathematical ideas <p>Note(s):</p> <ul style="list-style-type: none"> • The mathematical process standards may be applied to all content standards as appropriate. • TxRCFP:

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		<ul style="list-style-type: none"> ◊ Representing, applying, and analyzing proportional relationships ◊ Using expressions and equations to describe relationships, including the Pythagorean Theorem ◊ Making inferences from data • TxCCRS: <ul style="list-style-type: none"> ◊ VIII.B. Communication and Representation – Interpretation of mathematical work <ul style="list-style-type: none"> • VIII.B.1. Model and interpret mathematical ideas and concepts using multiple representations. • VIII.B.2. Summarize and interpret mathematical information provided orally, visually, or in written form within the given context. ◊ VIII.C. Communication and Representation – Presentation and representation of mathematical work <ul style="list-style-type: none"> • VIII.C.1. Communicate mathematical ideas, reasoning, and their implications using symbols, diagrams, models, graphs, and words. • VIII.C.2. Create and use representations to organize, record, and communicate mathematical ideas.
8.1F	Analyze mathematical relationships to connect and communicate mathematical ideas. <i>Process Standard</i>	<p>Analyze</p> <p>MATHEMATICAL RELATIONSHIPS TO CONNECT AND COMMUNICATE MATHEMATICAL IDEAS</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Mathematical relationships <ul style="list-style-type: none"> ◊ Connect and communicate mathematical ideas <ul style="list-style-type: none"> • Conjectures and generalizations from sets of examples and non-examples, patterns, etc. • Current knowledge to new learning

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		<p>Note(s):</p> <ul style="list-style-type: none"> • The mathematical process standards may be applied to all content standards as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Representing, applying, and analyzing proportional relationships ◊ Using expressions and equations to describe relationships, including the Pythagorean Theorem ◊ Making inferences from data • TxCCRS: <ul style="list-style-type: none"> ◊ VII.A. Problem Solving and Reasoning – Mathematical problem solving <ul style="list-style-type: none"> • VII.A.1. Analyze given information. ◊ VIII.A. Communication and Representation – Language, terms, and symbols of mathematics <ul style="list-style-type: none"> • VIII.A.1. Use mathematical symbols, terminology, and notation to represent given and unknown information in a problem. • VIII.A.2. Use mathematical language to represent and communicate the mathematical concepts in a problem. • VIII.A.3. Use mathematical language for reasoning, problem solving, making connections, and generalizing. ◊ VIII.B. Communication and Representation – Interpretation of mathematical work <ul style="list-style-type: none"> • VIII.B.1. Model and interpret mathematical ideas and concepts using multiple representations. ◊ VIII.C. Communication and Representation – Presentation and representation of mathematical work <ul style="list-style-type: none"> • VIII.C.1. Communicate mathematical ideas, reasoning, and their implications using symbols, diagrams, models, graphs, and words. • VIII.C.2. Create and use representations to organize, record, and communicate mathematical ideas. • VIII.C.3. Explain, display, or justify mathematical ideas and arguments using precise mathematical language in written or oral communications.

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		<ul style="list-style-type: none"> ◊ IX.A. Connections – Connections among the strands of mathematics <ul style="list-style-type: none"> • IX.A.1. Connect and use multiple key concepts of mathematics in situations and problems. • IX.A.2. Connect mathematics to the study of other disciplines.
8.1G	<p>Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.</p> <p><i>Process Standard</i></p>	<p>Display, Explain, Justify</p> <p>MATHEMATICAL IDEAS AND ARGUMENTS USING PRECISE MATHEMATICAL LANGUAGE IN WRITTEN OR ORAL COMMUNICATION</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Mathematical ideas and arguments <ul style="list-style-type: none"> ◊ Validation of conclusions <ul style="list-style-type: none"> • Displays to make work visible to others <ul style="list-style-type: none"> ◊ Diagrams, visual aids, written work, etc. • Explanations and justifications <ul style="list-style-type: none"> ◊ Precise mathematical language in written or oral communication <p>Note(s):</p> <ul style="list-style-type: none"> • The mathematical process standards may be applied to all content standards as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Representing, applying, and analyzing proportional relationships ◊ Using expressions and equations to describe relationships, including the Pythagorean Theorem ◊ Making inferences from data • TxCCRS: <ul style="list-style-type: none"> ◊ VII.A. Problem Solving and Reasoning – Mathematical problem solving

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		<ul style="list-style-type: none"> • VII.A.4. Justify the solution. ◊ VII.B. Problem Solving and Reasoning – Proportional reasoning <ul style="list-style-type: none"> • VII.B.1. Use proportional reasoning to solve problems that require fractions, ratios, percentages, decimals, and proportions in a variety of contexts using multiple representations. ◊ VII.C. Problem Solving and Reasoning – Logical reasoning <ul style="list-style-type: none"> • VII.C.1. Develop and evaluate convincing arguments. ◊ VIII.A. Communication and Representation – Language, terms, and symbols of mathematics <ul style="list-style-type: none"> • VIII.A.3. Use mathematical language for reasoning, problem solving, making connections, and generalizing. ◊ VIII.B. Communication and Representation – Interpretation of mathematical work <ul style="list-style-type: none"> • VIII.B.1. Model and interpret mathematical ideas and concepts using multiple representations. • VIII.B.2. Summarize and interpret mathematical information provided orally, visually, or in written form within the given context. ◊ VIII.C. Communication and Representation – Presentation and representation of mathematical work <ul style="list-style-type: none"> • VIII.C.3. Explain, display, or justify mathematical ideas and arguments using precise mathematical language in written or oral communications.
<u>8.12</u>	<i>Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to:</i>	
<u>8.12A</u>	Solve real-world problems comparing how interest rate and loan length affect the cost of	<u>Solve</u>

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	<p>credit. <i>Supporting Standard</i></p>	<p>REAL-WORLD PROBLEMS COMPARING HOW INTEREST RATE AND LOAN LENGTH AFFECT THE COST OF CREDIT</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Credit – buying or obtaining goods or services now with an agreement to pay in the future • Annual percentage rate (APR) – annual percentage rate applied to the balance on a loan compounded monthly • Principal of a loan – the original amount borrowed • Interest <ul style="list-style-type: none"> ◦ Simple interest for a loan – interest that is calculated only on the principal amount of the loan <ul style="list-style-type: none"> • Formula for simple interest from STAAR Grade 8 Mathematics Reference Materials <ul style="list-style-type: none"> ◦ $I = Prt$, where I represents the interest, P represents the principal amount borrowed, r represents the interest rate in decimal form, and t represents the number of years the principal amount is borrowed ◦ Compound interest for a loan – interest that is computed on the latest balance, including all compounded interest that has been added to the original loan principal <ul style="list-style-type: none"> • Formula for compound interest from STAAR Grade 8 Mathematics Reference Material <ul style="list-style-type: none"> ◦ $A = P(1 + r)^t$, where A represents the total amount of money borrowed including the principal and accumulated compounded interest, P represents the principal amount borrowed, r represents the interest rate in decimal form, and t represents the number of years the principal amount is borrowed • Generalizations about loans <ul style="list-style-type: none"> ◦ Longer the repayment period, usually the higher the interest rate ◦ Longer the repayment period, the lower the monthly payment

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		<ul style="list-style-type: none"> ◊ Longer the repayment period, the greater the amount of money repaid over the life of the loan • Real-world problem situations comparing interest rates, loan length, and/or cost of credit <p>Note(s):</p> <ul style="list-style-type: none"> • Grade Level(s): <ul style="list-style-type: none"> ◊ Grade 6 distinguished between debit cards and credit cards. ◊ Grade 7 calculated and compared simple interest and compound interest earnings. ◊ Grade 8 solves real-world problems comparing how interest rate and loan length affect the cost of credit. ◊ Algebra I will refer to $1 + r$ in the compound interest formula, $A = P(1 + r)^t$, as the factor and will be given the variable b. ◊ Mathematical Models with Applications will introduce analyzing compound interest for multiple compounding periods within a year. ◊ Various mathematical process standards will be applied to this student expectation as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Financial Literacy • TxCCRS: <ul style="list-style-type: none"> ◊ II.A. Algebraic Reasoning – Identifying expressions and equations <ul style="list-style-type: none"> • II.A.1. Explain the difference between expressions and equations. ◊ IX.A. Connections – Connections among the strands of mathematics <ul style="list-style-type: none"> • IX.A.1. Connect and use multiple key concepts of mathematics in situations and problems. • IX.A.2. Connect mathematics to the study of other disciplines. ◊ IX.B. Connections – Connections of mathematics to nature, real-world situations, and everyday life <ul style="list-style-type: none"> • IX.B.2. Understand and use appropriate mathematical models in the natural, physical, and social sciences.

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		<ul style="list-style-type: none"> IX.B.3. Know and understand the use of mathematics in a variety of careers and professions.
8.12B	<p>Calculate the total cost of repaying a loan, including credit cards and easy access loans, under various rates of interest and over different periods using an online calculator.</p>	<p>Calculate</p> <p>THE TOTAL COST OF REPAYING A LOAN, INCLUDING CREDIT CARDS AND EASY ACCESS LOANS, UNDER VARIOUS RATES OF INTEREST AND OVER DIFFERENT PERIODS USING AN ONLINE CALCULATOR</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> Credit – buying or obtaining goods or services now with an agreement to pay in the future Annual percentage rate (APR) – annual percentage rate applied to the balance on a loan compounded monthly Principal of a loan – the original amount borrowed Collateral – something which is pledged to secure repayment of a loan; in the event of default on the loan, the collateral is forfeited Interest <ul style="list-style-type: none"> Simple interest for a loan – interest that is calculated only on the principal amount of the loan <ul style="list-style-type: none"> Formula for simple interest from STAAR Grade 8 Mathematics Reference Materials <ul style="list-style-type: none"> $I = Prt$, where I represents the interest, P represents the principal amount borrowed, r represents the interest rate in decimal form, and t represents the number of years the principal amount is borrowed Compound interest for a loan – interest that is calculated on the latest balance, including all compounded interest that has been added to the original loan principal <ul style="list-style-type: none"> Formula for compound interest from STAAR Grade 8 Mathematics Reference Materials

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		<ul style="list-style-type: none"> ◊ $A = P(1 + r)^t$, where A represents the total amount of money borrowed including the principal and accumulated compounded interest, P represents the principal amount borrowed, r represents the interest rate in decimal form, and t represents the number of years the principal amount is borrowed • Generalizations about loans <ul style="list-style-type: none"> ◊ Longer the repayment period, the higher the interest rate ◊ Longer the repayment period, the lower the monthly payment ◊ Longer the repayment period, the higher the effective interest rate • Various types of loans <ul style="list-style-type: none"> ◊ Easy access loan <ul style="list-style-type: none"> • Payday loan – a high-interest, short term loan that is repaid when the borrower receives their next paycheck • Car title loan – a high-interest, short term loan of cash for which an automobile title is required as collateral ◊ Credit card <ul style="list-style-type: none"> • Tend to have higher interest rates than other types of loans • Various fees may be associated • Longer the repayment period, the higher the effective interest rate • Calculates compound interest • Online calculator to determine the costs of loans <p>Note(s):</p> <ul style="list-style-type: none"> • Grade Level(s): <ul style="list-style-type: none"> ◊ Grade 5 identified the advantages and disadvantages of different methods of payment, including check, credit card, and electronic payments. ◊ Grade 6 explained why it is important to establish a positive credit history. ◊ Grade 7 calculated and compared simple interest and compound interest earnings. ◊ Grade 8 introduces calculating and comparing interest on simple and compound on

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		<p>loans.</p> <ul style="list-style-type: none"> ◊ Algebra I will refer to $1 + r$ in the compound interest formula, $A = P(1 + r)^t$, as the factor and will be given the variable b. ◊ Mathematical Models with Applications will introduce analyzing compound interest for multiple compounding periods within a year. ◊ Various mathematical process standards will be applied to this student expectation as appropriate. <ul style="list-style-type: none"> • TxRCFP: <ul style="list-style-type: none"> ◊ Financial Literacy • TxCCRS: <ul style="list-style-type: none"> ◊ II.A. Algebraic Reasoning – Identifying expressions and equations <ul style="list-style-type: none"> • II.A.1. Explain the difference between expressions and equations. ◊ IX.A. Connections – Connections among the strands of mathematics <ul style="list-style-type: none"> • IX.A.1. Connect and use multiple key concepts of mathematics in situations and problems. • IX.A.2. Connect mathematics to the study of other disciplines. ◊ IX.B. Connections – Connections of mathematics to nature, real-world situations, and everyday life <ul style="list-style-type: none"> • IX.B.2. Understand and use appropriate mathematical models in the natural, physical, and social sciences. • IX.B.3. Know and understand the use of mathematics in a variety of careers and professions.
8.12C	<p>Explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time.</p> <p><i>Supporting Standard</i></p>	<p>Explain</p> <p>HOW SMALL AMOUNTS OF MONEY INVESTED REGULARLY, INCLUDING MONEY SAVED FOR COLLEGE AND RETIREMENT, GROW OVER TIME</p>

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		<p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Principal of an investment – the original amount invested • Various types of investments <ul style="list-style-type: none"> ◦ Savings account – a bank or credit union account in which the money deposited earns interest so there will be more money in the future than originally deposited <ul style="list-style-type: none"> • Traditional savings account – money put into a savings account much like paying a monthly expense such as a light bill or phone bill • Taxable investment account – many companies will create an investment portfolio with the specific purpose of saving and building a strong portfolio to be used to pay for college • Annuity – deductible and non-deductible contributions may be made, taxes may be waived if used for higher education; sold by financial institutions • U.S. savings bond – money saved for a specific length of time and guaranteed by the federal government • 529 account – educational savings account managed by the state, and is usually tax-deferred ◦ Retirement savings – optional savings plans or accounts to which the employer can make direct deposits of an amount deducted from the employee's pay at the request of the employee <ul style="list-style-type: none"> • 401(k) – a set amount of money, or percentage of pay, that is set aside from an employee's pay check by their employer, before the employee's wages are taxed. The employer may or may not contribute as well to the employee's 401(k) fund depending on employer's policy. The money is taxed when it is withdrawn at retirement age. In addition, if withdrawn prior to retirement age an additional penalty tax is assessed. • 403(b) – a set amount of money, or percentage of pay, that is set aside from an employee's pay check by their employer, before the employee's wages are taxed. The money is taxed when it is withdrawn at retirement age. In addition, if withdrawn prior to retirement age an additional penalty tax is assessed.

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		<ul style="list-style-type: none"> ◊ Similar to a 401(k); however, 403(b) plans are offered by non-profit organizations • Individual retirement account (IRA) – a set amount of money, or percentage of pay, that is invested by an individual with a bank, mutual fund, or brokerage. • Social Security – a percentage of an employee's pay required by law that the employer withholds from the employee's pay for social security savings which is deposited into the federal retirement system; payment toward that employee's eventual retirement; the employer also is required to pay a matching amount for the employee into the federal retirement system. • Generalizations of investing money regularly, including money for college and retirement <ul style="list-style-type: none"> ◊ Small amounts of money invested regularly build a larger principal amount to earn more interest ◊ A small amount of money invested for a longer period of time has the potential to earn as much interest as one large lump sum investment. ◊ Investing small amounts of money regularly may be more manageable for most people and demonstrates long-term financial planning and responsibility. <p>Note(s):</p> <ul style="list-style-type: none"> • Grade Level(s): <ul style="list-style-type: none"> ◊ Grade 7 analyzed and compared monetary incentives, including sales, rebates, and coupons. ◊ Various mathematical process standards will be applied to this student expectation as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Financial Literacy • TxCCRS: <ul style="list-style-type: none"> ◊ IX.A. Connections – Connections among the strands of mathematics <ul style="list-style-type: none"> • IX.A.1. Connect and use multiple key concepts of mathematics in situations and problems.

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		<ul style="list-style-type: none"> • IX.A.2. Connect mathematics to the study of other disciplines. ◊ IX.B. Connections – Connections of mathematics to nature, real-world situations, and everyday life <ul style="list-style-type: none"> • IX.B.2. Understand and use appropriate mathematical models in the natural, physical, and social sciences. • IX.B.3. Know and understand the use of mathematics in a variety of careers and professions.
8.12D	<p>Calculate and compare simple interest and compound interest earnings. <i>Readiness Standard</i></p>	<p>Calculate, Compare</p> <p>SIMPLE INTEREST AND COMPOUND INTEREST EARNINGS</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Principal of an investment – the original amount invested • Simple interest for an investment – interest paid on the original principal in an account, disregarding any previously earned interest • Compound interest for an investment – interest that is calculated on the latest balance, including all compounded interest that has been added to the original principal investment • Formulas for interest from STAAR Grade 8 Mathematics Reference Materials <ul style="list-style-type: none"> ◊ Simple interest <ul style="list-style-type: none"> • $I = Prt$, where I represents the interest, P represents the principal amount deposited, r represents the interest rate in decimal form, and t represents the number of years the principal amount is deposited ◊ Compound interest <ul style="list-style-type: none"> • $A = P(1 + r)^t$, where A represents the total accumulated amount including the principal and earned compounded interest, P represents the principal amount deposited, r represents the interest rate in decimal form, and t represents the number of years the principal amount is deposited

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		<ul style="list-style-type: none"> • Comparing simple and compound interest earnings <p>Note(s):</p> <ul style="list-style-type: none"> • Grade Level(s): <ul style="list-style-type: none"> ◊ Grade 7 calculated and compared simple interest and compound interest earnings. ◊ Grade 8 solves real-world problems comparing how interest rate and loan length affect the cost of credit. ◊ Algebra I will refer to $1 + r$ in the compound interest formula, $A = P(1 + r)^t$, as the factor and will be given the variable b. ◊ Mathematical Models with Applications will introduce analyzing compound interest for multiple compounding periods within a year. ◊ Various mathematical process standards will be applied to this student expectation as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Financial Literacy • TxCCRS: <ul style="list-style-type: none"> ◊ I.A. Numeric Reasoning – Number representations and operations <ul style="list-style-type: none"> • I.A.1. Compare relative magnitudes of rational and irrational numbers, and understand that numbers can be represented in different ways. ◊ II.A. Algebraic Reasoning – Identifying expressions and equations <ul style="list-style-type: none"> • II.A.1. Explain the difference between expressions and equations. ◊ IX.A. Connections – Connections among the strands of mathematics <ul style="list-style-type: none"> • IX.A.1. Connect and use multiple key concepts of mathematics in situations and problems. • IX.A.2. Connect mathematics to the study of other disciplines. ◊ IX.B. Connections – Connections of mathematics to nature, real-world situations, and everyday life <ul style="list-style-type: none"> • IX.B.2. Understand and use appropriate mathematical models in the natural, physical, and social sciences.

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		<ul style="list-style-type: none"> IX.B.3. Know and understand the use of mathematics in a variety of careers and professions.
8.12E	Identify and explain the advantages and disadvantages of different payment methods.	<p>Identify, Explain</p> <p>THE ADVANTAGES AND DISADVANTAGES OF DIFFERENT PAYMENT METHODS</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> Check – a written document telling the financial institution to pay a specific amount of money from your account to a specific person or organization <ul style="list-style-type: none"> Must include date, name of payee (person or organization to whom to pay), amount, and a signature from the account holder Advantages of checks <ul style="list-style-type: none"> Financial institutions can trace a check to prove your payment was or was not paid. Physical copy of transaction may be obtained if duplicate (carbon copy) checks are used or if electronic scanning from a financial institution is available. Immediate tracking of payments may help to stay within a budget. Payment form to those who do not accept other forms of payment such as credit cards, debit cards, or electronic payments Funds may be received without having a bank account. Funds may be mailed. Disadvantages of checks <ul style="list-style-type: none"> Checks usually must be purchased. Timing of withdrawals from bank account depends on when the check is cashed by the payee, which may take days or weeks. Fees may be assessed by a financial institution and payee if the value of the check exceeds the available funds in the account and there is not an overdraft

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		<p>protection.</p> <ul style="list-style-type: none"> ◊ Bounced check • Not all retailers accept checks as a form of payment. • Postage may be required if mailing a check as a form of payment. • Credit card – a card that can be used to borrow money from financial institutions, stores, or other businesses in order to buy products and services on credit <ul style="list-style-type: none"> ◊ Lending company allows an individual to borrow money and pay it back over time ◊ Advantages of credit card <ul style="list-style-type: none"> • Convenience of not carrying cash, counting change, or writing in a check book • Quick payment form of payment by swiping the card and signing for the purchase • Repayment may occur in one payment or over time. • Accepted most places as a form of payment • Incentives may be offered by the lender (e.g., cash back, frequent flier miles, other reward programs, etc.). • Information from credit card use and payments is linked to an individual's credit score to determine future lending. • Theft protection may be available if the card is used without authorization from the cardholder. ◊ Disadvantages of credit cards <ul style="list-style-type: none"> • Fees may be assessed for using a credit card (e.g., annual membership fees, interest rates on unpaid balances, etc.). • Spending may be more difficult to track • Limits on the amount of money from the lender as available credit may limit purchases • Failure to repay the entire amount borrowed may result in a decrease an individual's credit score to determine future lending and/or legal actions from the lender. • Application required for each credit card obtained • Not all brands of credit cards are accepted at every location (e.g., American

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TEKS# SE#	TEKS	SPECIFICITY
		<p>Express, Visa, a store specific credit card, etc.).</p> <ul style="list-style-type: none"> • May not be accepted as a form of payment for certain purchases (e.g., school lunches, bus fare, etc.) • Banking information may be compromised if lost or stolen • Debit card – a bankcard issued by a financial institution that is electronically linked to an individual's checking account for the purpose of making banking transactions, making payments for services, and/or making purchases <ul style="list-style-type: none"> ◦ Advantages of debit cards <ul style="list-style-type: none"> • Convenience of not carrying cash, counting change, or writing in a checkbook • Quick payment form of payment by swiping the card and signing for the purchase or entering a personalized identification code (PIN) • Money is withdrawn from account within hours of the purchase • Accepted most places • No application required • Incentives may be offered by the financial institution (e.g., cash back, etc.). • Purchases are usually accepted only for amounts of the available balance in the account ◦ Disadvantages of debit cards <ul style="list-style-type: none"> • Fees may be assessed for withdrawing money from an automated teller machine (ATM). • Information is not linked to an individual's credit score. • Limits may be set by a financial institution regarding the amount of purchases that can be made within a specific time period (e.g., \$700 within a 24-hour period, etc.). • Banking information may be compromised if lost or stolen • Requires a bank account • Stored-value card – a prepaid card that functions similar to a credit card or debit card <ul style="list-style-type: none"> ◦ Advantages of stored-value cards <ul style="list-style-type: none"> • Convenience of not carrying cash, counting change, or writing in a checkbook

Instructional Focus Document

Grade 8 Mathematics

TITLE : Unit 11: Financial Planning

SUGGESTED DURATION : 5 days

TEKS# SE#	TEKS	SPECIFICITY
		<ul style="list-style-type: none"> • Quick payment form of payment by swiping the card and signing for the purchase or entering a personalized identification code (PIN) • Money is withdrawn from card balance immediately. • Accepted any places that accept credit cards • No application required • Purchases are usually accepted only for amounts of the available balance on the card. ◦ Disadvantages of stored-value cards <ul style="list-style-type: none"> • Fees may be assessed for initial purchase of card and/or adding additional money to the card balance. • Spending may be more difficult to track. • Information is not linked to an individual's credit score. • No protection or reimbursement of funds if lost or stolen • Electronic payment (e-payment) – payments using security features on the Internet <ul style="list-style-type: none"> ◦ Various types of electronic payments <ul style="list-style-type: none"> • One-time customer to vendor payment • Recurring customer-to-vendor payments • Automatic bank-to-vendor payment ◦ Advantages of electronic payments <ul style="list-style-type: none"> • Convenience of not carrying cash, counting change, or writing in a check book • Quick form of payment by entering banking information • No postage needed to mail payment • May be set up as reoccurring payment ◦ Disadvantages of electronic payments <ul style="list-style-type: none"> • Bank information may be compromised if an unsecure website is used to make a purchase • Cash <ul style="list-style-type: none"> ◦ Advantages of cash <ul style="list-style-type: none"> • Quick payment form of payment

Instructional Focus Document

Grade 8 Mathematics

TITLE : Unit 11: Financial Planning

SUGGESTED DURATION : 5 days

TEKS# SE#	TEKS	SPECIFICITY
		<ul style="list-style-type: none"> • Accepted for most purchases ◊ Disadvantages of cash <ul style="list-style-type: none"> • Finite limit of funds available • May be difficult to track spending • Have to carry cash <p>Note(s):</p> <ul style="list-style-type: none"> • Grade Level(s): <ul style="list-style-type: none"> ◊ Grade 5 identified the advantages and disadvantages of different methods of payment, including check, credit card, and electronic payments. ◊ Grade 6 described the information in a credit report and how long it is retained. ◊ Various mathematical process standards will be applied to this student expectation as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Financial Literacy • TxCCRS: <ul style="list-style-type: none"> ◊ IX.B. Connections – Connections of mathematics to nature, real-world situations, and everyday life <ul style="list-style-type: none"> • IX.B.3. Know and understand the use of mathematics in a variety of careers and professions.
8.12F	Analyze situations to determine if they represent financially responsible decisions and identify the benefits of financial responsibility and the costs of financial irresponsibility.	<p>Analyze</p> <p>SITUATIONS TO DETERMINE IF THEY REPRESENT FINANCIALLY RESPONSIBLE DECISIONS</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Characteristics of financially responsible decisions

Instructional Focus Document

Grade 8 Mathematics

TITLE : Unit 11: Financial Planning

SUGGESTED DURATION : 5 days

TEKS# SE#	TEKS	SPECIFICITY
		<ul style="list-style-type: none"> ◊ Reserving high-interest credit card for emergencies (only use if necessary) ◊ Comparing interest rates and cost of credit prior to applying for loans or credit cards ◊ Planning a budget ◊ Staying within a planned budget ◊ Consistently invest to create savings for various timeframes and needs (e.g., emergency funds, car, college savings, home down payment, retirement savings, etc.) ◊ Make payments toward debt aggressively and/or do not create any new debt beyond what is necessary (e.g., home mortgage, etc.) • Characteristics of financially irresponsible decisions <ul style="list-style-type: none"> ◊ Create and/or increase debt quickly without financial planning ◊ Create long term debt ◊ Promise to pay without consulting budget ◊ Making promises to pay that are not within planned budget ◊ Accepting multiple credit card offers without considering interest rates ◊ Putting needs on a high-interest credit card (e.g., groceries, etc.) <p>Identify</p> <p>THE BENEFITS OF FINANCIAL RESPONSIBILITY AND THE COSTS OF FINANCIAL IRRESPONSIBILITY</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Various benefits of financial responsibility <ul style="list-style-type: none"> ◊ Interest on investments ◊ Earning good credit scores • Various costs of financial irresponsibility <ul style="list-style-type: none"> ◊ Insufficient funds ◊ Overdraft fees ◊ Compounding interest charges

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Grade 8 Mathematics

TITLE : Unit 11: Financial Planning

SUGGESTED DURATION : 5 days

TEKS# SE#	TEKS	SPECIFICITY
		<ul style="list-style-type: none"> ◊ Earning poor credit scores <p>Note(s):</p> <ul style="list-style-type: none"> • Grade Level(s): <ul style="list-style-type: none"> ◊ Grade 6 explained why it is important to establish a positive credit history. ◊ Grade 8 introduces analyzing situations to determine if they represent financially responsible decisions and identifying the benefits of financial responsibility and the costs of financial irresponsibility. ◊ Various mathematical process standards will be applied to this student expectation as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Financial Literacy • TxCCRS: <ul style="list-style-type: none"> ◊ IX.B. Connections – Connections of mathematics to nature, real-world situations, and everyday life <ul style="list-style-type: none"> • IX.B.3. Know and understand the use of mathematics in a variety of careers and professions.
8.12G	<p>Estimate the cost of a two-year and four-year college education, including family contribution, and devise a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance for at least the first year of college.</p> <p><i>Supporting Standard</i></p>	<p>Estimate</p> <p>THE COST OF A TWO-YEAR AND FOUR-YEAR COLLEGE EDUCATION, INCLUDING FAMILY CONTRIBUTION</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Various considerations for each college <ul style="list-style-type: none"> ◊ School related costs <ul style="list-style-type: none"> • Tuition (in state or out of state)

Instructional Focus Document

Grade 8 Mathematics

TITLE : Unit 11: Financial Planning

SUGGESTED DURATION : 5 days

TEKS# SE#	TEKS	SPECIFICITY
		<ul style="list-style-type: none"> • Fees • Room and board • Books • Cost of living in location (various costs of living depending on the city and state of college) • Inflation – the general increase in prices and decrease in the purchasing value of money <ul style="list-style-type: none"> ◦ When planning ahead of time for college savings, the increase in all expenses based on inflation must be considered (e.g., tuition, room and board, etc.) ◦ Family contribution <p>Devise</p> <p>A PERIODIC SAVINGS PLAN FOR ACCUMULATING THE MONEY NEEDED TO CONTRIBUTE TO THE TOTAL COST OF ATTENDANCE FOR AT LEAST THE FIRST YEAR OF COLLEGE</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> • Periodic savings plan <ul style="list-style-type: none"> ◦ Accumulating money to contribute to a savings plan <ul style="list-style-type: none"> • Savings account – a bank or credit union account in which the money deposited earns interest so there will be more money in the future than originally deposited • 529 account – educational savings account managed by the state, and is usually tax-deferred • Family contribution • Plan for saving for college <ul style="list-style-type: none"> ◦ Estimate the total cost of attendance for each year at the college ◦ Determine what, if any, family contributions will be received ◦ Determine if a savings account was established to pay for college

Instructional Focus Document

Grade 8 Mathematics

TITLE : Unit 11: Financial Planning

SUGGESTED DURATION : 5 days

TEKS# SE#	TEKS	SPECIFICITY
		<ul style="list-style-type: none"> ◊ Calculate the cost of attending college and subtract the amount saved or contributed to determine yearly or monthly payments toward a college savings plan • Creation of a budget to include a savings plan to cover the cost of college <p>Note(s):</p> <ul style="list-style-type: none"> • Grade Level(s): <ul style="list-style-type: none"> ◊ Grade 6 explained various methods to pay for college, including through savings, grants, scholarships, student loans, and work-study. ◊ Grade 7 calculated and compared simple and compound interest earnings. ◊ Various mathematical process standards will be applied to this student expectation as appropriate. • TxRCFP: <ul style="list-style-type: none"> ◊ Financial Literacy • TxCCRS: <ul style="list-style-type: none"> ◊ IX.A. Connections – Connections among the strands of mathematics <ul style="list-style-type: none"> • IX.A.1. Connect and use multiple key concepts of mathematics in situations and problems. ◊ IX.B. Connections – Connections of mathematics to nature, real-world situations, and everyday life <ul style="list-style-type: none"> • IX.B.3. Know and understand the use of mathematics in a variety of careers and professions.

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Grade 8 Mathematics

TITLE : Unit 11: Financial Planning

SUGGESTED DURATION : 5 days

ELPS#	SUBSECTION C: CROSS-CURRICULAR SECOND LANGUAGE ACQUISITION ESSENTIAL KNOWLEDGE AND SKILLS.
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The English Language Proficiency Standards (ELPS), as required by 19 Texas Administrative Code, Chapter 74, Subchapter A, §74.4, outline English language proficiency level descriptors and student expectations for English language learners (ELLs). School districts are required to implement ELPS as an integral part of each subject in the required curriculum.

School districts shall provide instruction in the knowledge and skills of the foundation and enrichment curriculum in a manner that is linguistically accommodated commensurate with the student's levels of English language proficiency to ensure that the student learns the knowledge and skills in the required curriculum.

School districts shall provide content-based instruction including the cross-curricular second language acquisition essential knowledge and skills in subsection (c) of the ELPS in a manner that is linguistically accommodated to help the student acquire English language proficiency.

<http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html#74.4>

Choose appropriate ELPS to support instruction.

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