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| **TEXAS CTE LESSON PLAN**  [www.txcte.org](http://www.txcte.org) | |
| **Lesson Identification and TEKS Addressed** | |
| **Career Cluster** | Human Services |
| **Course Name** | Dollars and Sense |
| **Lesson/Unit Title** | Interest: What Does It Mean? |
| **TEKS Student Expectations** | **130.273. (c) Knowledge and Skills**  (3) The student demonstrates management of financial resources to meet the goals of individuals and families across the life span. The student is expected to:  (C) connect mathematics to the understanding of interest, including avoiding and eliminating credit card debt  (7) The student identifies skills and attributes necessary for sustaining a chosen lifestyle. The student is expected to:  (C) determine how interests, abilities, personal priorities, and family responsibilities affect career choices |
| **Basic Direct Teach Lesson**  (Includes Special Education Modifications/Accommodations and  one English Language Proficiency Standards (ELPS) Strategy) | |
| **Instructional Objectives** | **Students will:**   * Utilize math, interest calculators and spreadsheets to understand how making a larger payment can reduce the total interest they pay * Understand how interest can affect their standard of living * Implement tools they can use to help them understand what they are paying or earning in interest |
| **Rationale** | Many people sign credit card applications and obtain loans without really having any idea how much they might be paying in interest. What is interest? What are the pros and cons of interest? In this lesson, you will use many tools to figure interest. You will use interest calculators on the Internet and spreadsheets. More than just the ability to use the tools, you need to understand some principles of using credit. At the end of the lesson, you will evaluate the effects of interest on your lifestyle and finances. |
| **Duration of Lesson** | Six 45-minute class periods |
| **Word Wall/Key Vocabulary**  *(ELPS c1a, c, f; c2b; c3a, b, d; c4c; c5b) PDAS II (5)* | **Adjusted gross pay:** The amount a person pays taxes on after either subtracting the allowable amount for a standard deduction, or by itemizing deductions such as mortgage interest, charitable giving, and some medical expenses  **Annual percentage rate (APR):** For credit cards, the APR is the cost of credit expressed as a yearly interest rate; each billing period, the company charges a fraction of the annual rate  **Asset:** Something you own of value  **Compound interest:** Earning interest on the principal plus the interest you have already earned  **Credit card agreement:** A document that outlines the terms and conditions for using your credit card; your contract with your credit card company  **Equity:** Ownership in something such as a house  **Fixed-rate APR:** An APR set at a certain percent that cannot change during the period of time outlined in your credit card agreement; if your company does not specify a time period, the rate cannot change as long as your account is open  **“Go-to” rate:** Interest rate you are charged after the introductory rate  **Gross pay:** The total amount of a person’s income  **Interest:** Fee charged by a lender on money borrowed or a fee paid to an investor on his or her investment  **Interest rate:** The price paid for borrowing money  **Introductory APR:** The APR charged during the credit card’s introductory period after a credit card account is opened  **Investment:** Money placed in an account with the goal of making money  **Liabilities:** Debt or what is owed  **Minimum interest charge:** The minimum amount of interest you will be charged if you are charged any interest  **Net pay:** Wages that remain after taxes are withheld, often called take home pay  **Penalty APR:** The APR charged on new transactions if you trigger the penalty terms in your credit card contract  **Principle:** The total amount of money outstanding on a loan  **Purchase APR:** The APR you will pay for purchases if you carry a balance on your credit card  **Rule of 72:** Shows how long it will take to double an amount of money for a given interest rate  **Simple interest:** Interest earned only on the original amount or principal  **Tax deduction:** An allowable amount of money that is subtracted directly from tax owed  **Tax credit:** An allowable amount that is subtracted directly from tax owed |
| **Materials/Specialized Equipment Needed** | **Equipment:**   * Computer with projector for PowerPoint presentation * Computers with Excel to create spreadsheets * Computers with Internet access (be sure to follow district guidelines)   Note: If individual equipment is not available, teacher can teach the assignments as a class from a projected copy as long as students can see the screen.  **Materials:**   * Brochures from lending institutions * Calculators * Credit card statements * Play money (can be purchased at a store for minimal cost) * Voided credit card applications   **Supplies:**   * Pen or pencil * Copies of handouts   **PowerPoint:**   * Interest: What Does It Mean? Part I * Interest: What Does It Mean? Part II   **Technology:**   * Free iPad Apps:   + Budgets for iPad free<https://itunes.apple.com/us/app/budgets-for-ipad-free/id400848995?mt=8>   + Don’t Break the Bank<https://itunes.apple.com/us/app/dont-break-the-bank/id537450041?mt=8>   + Goal Getter – Financial goal planner<https://itunes.apple.com/us/app/goalgetter-financial-goal/id465208727?mt=8> * Infographic:   + Infographic: Cash vs. Card Consumer Credit asked consumers what they do with the cash they are given if they pay the bill for a group of people using their credit or debit card. Find out more interesting statistics about consumer cash usage versus credit card usage by checking out this comprehensive cash versus credit card usage infographic.<http://www.consumercredit.com/financial-education/infographics/infographic-cash-vs-card.aspx> * Ted Talk:   + The Future of Money: Todd Hirsch at TEDxEdmonton In May 2007, Todd became Senior Economist at ATB Financial. As the bank’s top economic expert, he tracks and analyzes developments in Alberta’s and North America’s economy.<http://youtu.be/K0n3BGId9nU>   **Videos:**   * How to Teach the Rule of 72 to Children Teaching Children about the Rule of 72<http://youtu.be/ShwCeTeKWOI>   Khan Academy Introduction to Mortgage Loans<https://www.khanacademy.org/science/core-finance/housing/mortgages-tutorial/v/introduction-to-mortgage-loans>  **Graphic organizers:**   * Controlling interest, you pay * Controlling interest, you pay (key) * Slide presentation notes   **Handouts:**   * A penny or $10,000.00 * A penny or $10,000.00 (key) * Check for understanding interest quiz * Check for understanding interest quiz (key) * How money grows * How money grows (key) * Instructions for setting up your spreadsheet * Is your interest working for you? * Is your interest working for you? (key) * Looking at your spreadsheet * Looking at your spreadsheet (key) * Using a credit calculator * Using a credit calculator (key) * Using a credit calculator to figure a car payment * Using a credit calculator to figure a car payment (key) |
| **Anticipatory Set**  (May include pre-assessment for prior knowledge) | **Prior to class:**  Note to Teacher: More information on finances can be found in these courses:   * Interpersonal Studies Financial Obligations Throughout the Family Life Cycle * Dollars and Sense Take It to the Bank * Personal Money Management * Managing Your Finances   Refer to Practical Money Skills for grades 9-12 for additional lesson plans, resources, and activities. Educators can use the 22 free, standards-aligned lessons in sequence or on an individual basis.<https://www.practicalmoneyskills.com/foreducators/lesson_plans/highschool.php>   * Become familiar with PowerPoint, handouts, and activities. * Teacher note: watch video Introduction to Mortgage Loans<https://www.khanacademy.org/science/core-finance/housing/mortgages-tutorial/v/introduction-to-mortgage-loans> before showing it to students. It carefully explains interest on a mortgage and how it affects taxes.   This lesson is divided into several mini-lessons to make it easier to present the information on multiple days. By distributing the information into mini-lessons, it will be easier for students to understand the information.  **Before class begins:**  Display as many of the lesson-related supplies (see Materials or Specialized Equipment Needed) as you have available on a table in front of the room.  Post the word wall on the board and discuss the meaning of the vocabulary terms.  Write the word interest and credit on the board, and ask students what images come to mind when they hear the terms. Are the images positive? Negative? Why? Have students brainstorm different examples of interest consumers pay. Assign a scribe to write the examples on the board.  Ask students questions to assess what they already know about interest:   * What is interest? * How can we control the amount of interest we pay? * How does the amount we pay in interest affect our spendable income? * How does your credit rating affect your interest rate? * How might knowing exactly how much interest you are paying affect your spending habits? * What tools might you use to help you determine how much interest you are paying?   Distribute voided credit card applications to each student. Discuss the applications and the rate of interest on each. Discuss with students how many people might sign a credit card application or a loan and not really understand how much interest they are paying. Most people use credit to buy large ticket items, such as a home or car, as that is the only way they can afford to buy them.  You might play a game where you ask students, “If I charged $1,000.00 today on a credit card at 21% interest and paid the minimum payment of $30.00 a month, how long would it take me to pay it off?” Ask students to write down their guesses, and then use a credit calculator from [www.creditcards.com/calculators](http://www.creditcards.com/calculators) or another website to find the answer and determine which student had the closest guess.  Answer: It would take you 51 months to pay off your debt of $1000.00 with a minimum payment of $30.00 per month. The total interest would be $514.00. |
| **Direct Instruction \*** | Note to teacher: Prior to beginning this lesson, please review, preview, and select the appropriate multimedia for your classes.  Introduce lesson objectives, terms, and definitions.  Distribute Slide Presentation Notes for note taking. Students will be expected to take notes while viewing the slide presentation. Teacher will determine the notes to be recorded by students.  Introduce PowerPoint Interest: What Does It Mean? Part I slides 1-12. Discuss what interest is and how it relates to the Rule of 72.  Use appropriate notes from Presentation Notes for Interest: What Does It Mean? Part I for discussion.  See Guided Practice Activity One  This activity uses tools to figure out if it would be wiser to double a penny for 30 days or add the sum of $10,000.00 a day for 30 days.  Continue with slide presentation Interest: What Does It Mean? Part I slides 13-30 on making interest work for you. Have students continue using SlidePresentation Notes for note taking.  Use appropriate notes from Presentation Notes for Interest: What Does It Mean? Part I for discussion.  See Guided Practice Activity Two  Students will practice using a calculator during Guided Practice.  Continue with slide presentation Interest: What Does It Mean? Part II slides 2-15 on credit cards, obtaining a car and home loans. Have students continue using Slide Presentation Notes for note taking.  Use appropriate notes from Presentation Notes for Interest: What Does It Mean? Part II for discussion.  See Guided Practice Activity Three  Videos included in the PowerPoint presentation:   * Khan Academy Introduction to Mortgage Loans<https://www.khanacademy.org/science/core-finance/housing/mortgages-tutorial/v/introduction-to-mortgage-loans> * How to Teach the Rule of 72 to Children Teaching Children about the Rule of 72<http://youtu.be/ShwCeTeKWOI>   *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * providing students with a copy of the notes or a fill-in-the-blank note sheet to follow along with instruction * pairing up students with elbow partners who can assist them with verbal and written responses to the lesson |
| **Guided Practice \*** | **Guided Practice Activity One**  Question: Would you rather have $10,000.00 per day for 30 days or a penny that doubled in value every day for 30 days? Distribute the A Penny or $10,000.00 handout and allow the students to work together in determining the amount at the end of 30 days. Distribute calculators or allow the students to use the calculators on their cell phones (be sure to follow district guidelines on the use of cellular phones).  Use A Penny or $10,000.00 ($10,000.00 Key) or A Penny or $10,000.00(PennyKey) to check students’ answers.  Answer: Surprisingly, we should choose the doubling penny because at the end of 30 days, we’d have about $5 million versus the $300,000.00 we’d have if we chose $10,000.00 per day! What makes this possible? Compound interest is often called the eighth wonder of the world because it seems to possess magical powers, like turning a penny into $5 million dollars. The great part about compound interest is that it applies to money, and it helps us to achieve our financial goals, such as becoming a millionaire, retiring comfortably, or being financially independent. Remember what Benjamin Franklin said, “A penny saved is a penny earned.”  **Guided Practice Activity Two**  Distribute Is Interest Working for You? Handout. Students will use a calculator to evaluate if interest is working for them or against them in different scenarios. Interest they pay is working against them because it reduces the amount of money they can spend on other things. Interest earned on investments works for them because it increases the money they can spend on other things. Use Is Interest Working for You? (Key) handout to check students’ answers. Discuss conclusions of the activity:   * Buying an item on sale is no bargain if you are going to pay credit card interest. The item will likely cost you more than the regular price. * Credit cards should be paid off during the grace period to avoid interest charges. * Credit cards should be used for “needs” not “wants” and paid off as quickly as possible.   Distribute How Money Grows handout. Use this handout to help students picture how money grows through compounding over a period of years. Lead students to draw inferences from the data shown such as how much money an individual will accumulate by starting even a small savings program early in life and how significant accumulations begin to mushroom later in the savings period. Allow students time to answer the questions on the handout. Use How Money Grows (Key) to check students’ answers.  **Guided Practice Activity Three**  Allow students an opportunity to practice using computer calculating tools by completing Using a Credit Calculator. Use Using a Credit Calculator (Key) to check students’ answer.  Check for understanding.  Distribute Using a Credit Calculator to Figure a Car Payment to determine a car payment for a $25,000.00 loan. Use Using a Credit Calculator to Figure a Car Payment (Key) to check students’ answers.  Check for understanding.  Teacher note: You may opt to have the students create a spreadsheet to determine the payments of a mortgage. See Enrichment Activity.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * extra time for assignments * positive feedback * copies of the slide presentation * copy of the spreadsheet |
| **Independent Practice/Laboratory Experience/Differentiated Activities \*** | Students will work on activities included in Guided Practice One, Two and Three.  Lead students to share and discuss their responses. Check for understanding.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * extra time for assignments * positive feedback * copies of the slide presentation * copy of the spreadsheet |
| **Lesson Closure** | Review terms, definitions, and lesson objectives.  Questions:   * Is it a bargain to buy something on sale if you have to use a credit card to buy it? * Should a person use a credit card to buy a consumable item like a pizza? Why or why not? * Should you buy a house if you only plan on living in it for two or three years? Why or why not? * Is it better to invest at six percent simple interest or five percent compounded interest if you are investing for a long period of time? * What have you learned that will affect choices you make concerning credit? * How can you reduce the amount of interest you pay?   Distribute the graphic organizer Controlling the Interest You Pay. Encourage students to use the graphics on the handout as clues to complete the handout:   * Long report represents the length of a loan * Credit card with the percent sign represents the interest rate * A+ represents a credit score   Controlling the Interest, You Pay (Key) has been provided to you as a resource to check students’ work. |
| **Summative/End of Lesson Assessment \*** | Assessments during lesson:   * A Penny or $10,000.00 * How Money Grows * Is Your Interest Working for You? * Using a Credit Calculator * Using a Credit Calculator to Figure a Car Payment * Controlling the Interest, You Pay   Distribute Check for Understanding Interest Quiz. Use Check for Understanding Interest Quiz (Key) to grade the end-of-lesson assessment.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * extra time for assignments * copies of the slide presentation for study * copy of the spreadsheet * modified quiz |
| **References/Resources/**  **Teacher Preparation** | **Images:**   * Microsoft Clip Art: Used with permission from Microsoft.   **Textbooks:**   * Campbell, S. R. (2010). *Foundations of personal finance*. Tinley Park, IL: Goodheart-Willcox   **Websites:**   * Bank Rate  Use our calculators to finesse your monthly budget, compare borrowing costs and plan for your future. See our full list of calculator and decision tools.<http://www.bankrate.com/calculators.aspx> * Board of Governors of the Federal Reserve System Consumer guide on interest rates and credit card information.<http://www.federalreserve.gov/creditcard/rates.html> * Creditcards.com  The calculators on the website are designed to help you find answers to your financial questions.<http://www.creditcards.com/calculators/> * Federal Deposit Insurance Corporation (FDIC) Preserves and promotes public confidence in the U.S. financial system by insuring deposits in banks and thrift institutions for at least $250,000; by identifying, monitoring, and addressing risks to the deposit insurance funds; and by limiting the effect on the economy and the financial system when a bank or thrift institution fails.<http://www.fdic.gov/> * Federal Reserve.gov Sample of a Credit Card<http://www.federalreserve.gov/creditcard/flash/offerflash.html> * Myarmyonesource.com Debt Payoff Calculator<http://www.myarmyonesource.com/data/Calculators/Debt_Payoff/DebtPayoff.html> * MyMoney.gov Save and invest your money.<http://www.mymoney.gov/save-invest/Pages/saveandinvest.aspx> * Practical Money Skills for Life To help consumers and students of all ages learn the essentials of personal finance, Visa has partnered with leading consumer advocates educators and financial institutions to develop the Practical Money Skills program.<https://www.practicalmoneyskills.com/foreducators/lesson_plans/lev9-12/SA_Lesson10.pdf>   **Videos:**   * Khan Academy Introduction to Mortgage Loans<https://www.khanacademy.org/science/core-finance/housing/mortgages-tutorial/v/introduction-to-mortgage-loans> * How to Teach the Rule of 72 to Children Teaching Children about the Rule of 72<http://youtu.be/ShwCeTeKWOI> |
| **Additional Required Components** | |
| **English Language Proficiency Standards (ELPS) Strategies** | * Ask students to repeat your instructions back to you to be sure they know what is expected of them. * Discuss vocabulary in detail, making sure students understand before moving on. * Use graphic organizers and visuals to help explain the lesson. |
| **College and Career Readiness Connection[[1]](#footnote-1)** |  |
| **Recommended Strategies** | |
| **Reading Strategies** | Current Events: Assign students to read about the impact of interest on the consumer. Information can be found in newspaper articles, magazines, journals, and online print. Suggestions:   * American Household Credit Card Debt Statistics for 2014<http://www.nerdwallet.com/blog/credit-card-data/average-credit-card-debt-household/> * For Young Adults and Teens: Quick Tips for Managing Your Money<http://www.fdic.gov/consumers/consumer/news/cnfall12/> * MyMoney.gov Save and invest your money.<http://www.mymoney.gov/save-invest/Pages/saveandinvest.aspx> * Federal Deposit Insurance Corporation Summer 2007 – Special Edition: 51 Ways to Save Hundreds on Loans and Credit Cards * Federal Deposit Insurance Corporation Auto Loans: Take Control of the Financing Before You Take Control of the Wheel * Federal Deposit Insurance Corporation Taking Care of Your Credit Cards   <https://www.fdic.gov/index.html> |
| **Quotes** | A goal is a dream with a deadline. **-Napoleon Hill**  Arriving at one goal is the starting point to another. **-John Dewey**  If you don’t know where you are going, you’ll end up someplace else. **-Yogi Berra**  Success is a lousy teacher. It seduces smart people into thinking they can’t lose. **-Bill Gates**  I believe that if you show people the problems and you show them the solutions they will be moved to act. **-Bill Gates** |
| **Writing Strategies**  **Journal Entries + 1 Additional Writing Strategy** | **Journal Entries:**   * The decisions I make concerning using credit can increase or decrease my financial security because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. * Money may not make me happy, but managing my money does because \_\_\_\_\_\_\_\_\_\_. * The benefits of knowing how much I am paying in interest are\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. * When I invest long-term, compounding interest will increase my investment because \_\_\_\_\_\_\_\_\_\_\_\_\_. * Having a good credit score benefits me because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   **Writing strategy:**   * Raft writing strategy   + Role- peer educator   + Audience-peers   + Format- poster   + Topic- what you should know about interest before getting a credit card |
| **Communication**  **90 Second Speech Topics** | * I can be smart about my finances by\_\_\_\_\_\_\_\_\_\_\_. * My plans to be financially stable in the future can be obtained by\_\_\_\_\_\_\_\_\_\_\_\_\_. * I should avoid using credit cards because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. * My financial goals for the next five years include\_\_\_\_\_\_\_\_\_\_\_. * It is important to invest for the future because\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| **Other Essential Lesson Components** | |
| **Enrichment Activity**  (e.g., homework assignment) | * Have all students order a FREE copy of Consumer Action Handbook to get the latest tips on credit, money, filing a complaint and more.<http://www.usa.gov/consumer-action-handbook/order-form.shtml> * Using an auto loan calculator, determine how much you can spend if you want a car payment of $300.00 a month for four years. How about a $300.00 monthly car payment for five years? How does changing the length of the loan from four years to five years affect the amount you pay in interest? * Refer to Money as You Grow poster for 20 Things Kids Need to Know to Live Financially Smart Lives.<http://moneyasyougrow.org/_print/activities_poster.pdf> * Have students create their own spreadsheets using Instructions for Setting up Your Spreadsheet. Some teachers might determine this is too difficult for the level of their class and decide to use the spreadsheet key and skip this step. Upon completion of the spreadsheets, students will complete Looking at Your Spreadsheet. Looking at Your Spreadsheet (Key) has been provided to you to check students’ answers. * TED Talk: TEDx is a program of local, self-organized events that bring people together to share a TED-like experience. At a TEDx event, TEDTalks videos and live speakers combine to spark deep discussion and connection in a small group. These local, self-organized events are branded TEDx, where x = independently organized TED event. The video below is related to this lesson. Allow students to view the video and lead a discussion concerning the TED Talk. * The Future of Money: Todd Hirsch at TEDxEdmonton In May 2007, Todd became Senior Economist at ATB Financial. As the bank’s top economic expert, he tracks and analyzes developments in Alberta’s and North America’s economy.<http://youtu.be/K0n3BGId9nU> |
| **Family/Community Connection** | Guest speaker’s options include:   * Better Business Bureaus in Texas * Consumer Protection Agencies * Credit counselor * Customer service manager * Financial advisers and planners * Identify Theft Resource Center |
| **CTSO connection(s)** | Family, Career, and Community Leaders of America (FCCLA) <http://texasfccla.org/>  STAR Events:   * Applied Technology – An individual or team event: recognizes participants who develop a project using technology that addresses a concern related to Family and Consumer Sciences and/or related occupations. The project integrates and applies content from academic subjects. * Chapter Service Project (Display and Manual). A team event: recognizes chapters that develop and implement an in-depth service project that makes a worthwhile contribution to families, schools, and communities. Students must use Family and Consumer Science content and skills to address and take action on a community need (such as a neighborhood childcare or meal sharing co-op).   National Project:  **Financial Fitness** The FCCLA Financial Fitness national peer education program involves youth teaching one another how to make, save and spend money wisely. Through FCCLA’s Financial Fitness program, youth plan and carry out projects that help them and their peers learn to become wise financial managers and smart consumers. |
| **Service Learning Projects** | Successful service learning project ideas originate from student concerns and needs. Allow students to brainstorm about service projects pertaining to the lesson. For additional information on service learning see<http://www.ysa.org/>  Create a Peer Education program where students share what they have learned with other students. |

1. Visit the Texas College and Career Readiness Standards at <http://www.thecb.state.tx.us/collegereadiness/CRS.pdf>, Texas Higher Education Coordinating Board (THECB), 2009. [↑](#footnote-ref-1)