FYE 105 Financial Literacy Curriculum Unit

Prepared for Jefferson Community and Technical College

CENTRAL TO AMERICA'S ECONOMY®

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Notes About Our Lessons

Visuals and Handouts referenced in the Materials section and throughout the lesson are provided at the end of the respective lesson.

Suggested answers are provided in *italics*.

Frequently Asked Questions

Q: Can we modify the instruction to fit our individual student's needs?
A: Of course, as long as you cover the core content of the lesson.

Q: Our student's cannot fathom saving. Many of them live paycheck-to-paycheck or worse. How can we teach savings unit so that is relevant to them?
A: First, they can help themselves now by minimizing the amount of student debt they incur via student loans. Second, stress that they are obtaining post-secondary education for a reason – to obtain a better job in order to earn a livable wage so that they are able to save one day. When that time comes, they should have the skills they need to develop and implement a savings plan.

Q: In the budgeting lesson, student loans are not listed in the income section, but I know that is the money my students use to pay living expenses and attend school. May they enter the amount of their student loans as 'income'?
A: It is not recommended. Please stress that loans are not in fact income, they are a debt. And, the debt must be repaid. Students must realize that 'student loans' are only available to them while they are a student and have to be repaid.

Q: Is this content available online?
A: Yes, please visit https://www.stlouisfed.org/education

Q: I have questions about the content and/or teaching methods, who can I contact?
A: Please send an email to our common email box at economiceducation@stls.frb.org and put 'FYE 105' in the subject line.

Income

Lesson 1: Invest in Yourself

Lesson Description
Students are divided into groups to produce name tents. Each of four groups in the classroom produce name tents in a different way to highlight different levels of human capital. The students identify the ways in which people invest in human capital and the link between investment in human capital and earning income.

Concepts
Human capital
Investment in human capital

Objectives
Students will:

- Define human capital and investment in human capital.
- Give examples of investment in human capital.
- Describe the relationship between a person's level of education and income-earning potential.

Time Required
30 minutes (excluding Homework)

Materials

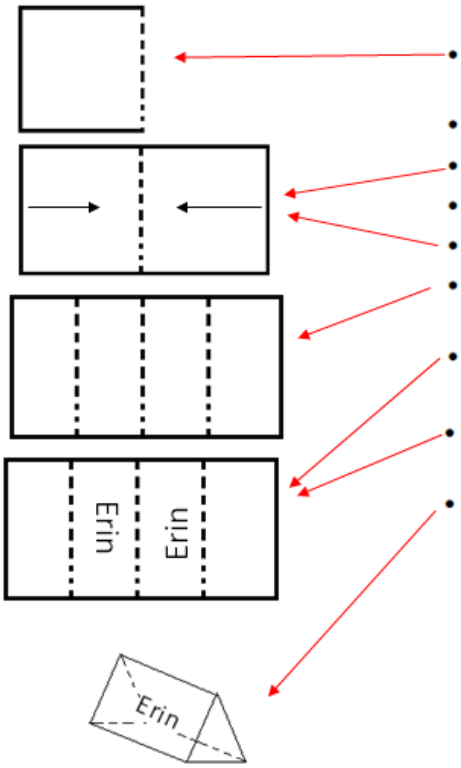
- One sheet of light-colored construction paper per student plus one sheet for the teacher
- One dark-colored marker per student
- Visual 1 – one copy for the instructor
- Handout 1 – one copy per student
- Handout 2 – one copy for the instructor

Procedures

1. Explain that students will participate in a personal finance unit to learn more about earning income, saving, responsible use of credit, and budgeting.

2. Tell students that the first activity involves creating name tents for display on their desks for class and for guest speakers.

3. Demonstrate how to produce a name tent as follows:



- Fold the piece of construction paper in half, shorter edges (8 ½") together. Crease the center fold. The folded paper should measure 8 ½" x 5 ½".
- Open the page to 8 ½" x 11".
- Fold the bottom 8 ½" edge to the middle crease. Crease the fold.
- Open the page to 8 ½" x 11".
- Fold the top 8 ½" edge to the middle crease. Crease the fold.
- The paper should now have four sections each measuring approximately 2 ¾" x 8 ½".
- Starting from one end of the paper, count down three rectangles. Print your first name in large letters in the rectangle.
- Turn the paper upside-down. Again count down three rectangles and print your first name in large letters in the rectangle.
- Fold the paper to create a tent with the name displayed on both sides.

4. Divide the students into four groups. Explain that each group will have different rules for folding name tents. Describe the rules for each group as follows.

   - Group 1: Each of you will remain seated to produce your own name tent, using only one hand, your nondominant hand—that is, the hand with which you do not write—to produce the name tent. You must keep your dominant hand behind your back.

   - Group 2: Each of you will remain seated to produce your own name tent, using only one hand, your dominant hand—that is, the hand with which you write—to produce the name tent. You must keep your nondominant hand behind your back.

   - Group 3: Each of you will remain seated to produce your own name tent, using both hands.

   - Group 4: Each of you will produce your own name tent while standing and using only one hand—the nondominant hand—to produce the name tent. You must keep your dominant hand behind your back. You may not use the desk, table, walls, chair, floor, or each other.

   - None of the groups may begin producing name tents until the class is told to begin.

   - You may not help one another produce name tents.

- When each student finishes folding his or her name tent, he or she should raise a hand.

- Students will be timed and will have a maximum of two minutes to make the name tent.

5. Draw the following table on the board and use this to tally students who raise their hands upon completing the name tent.

	Group 1	Group 2	Group 3	Group 4
30 seconds				
60 seconds				
90 seconds				
120 seconds				

6. Distribute a piece of construction paper to each student. Remind them that students in each group must fold name tents according to the rules described and that they are to raise their hands individually when they have finished their name tents. Tell students they may begin. As students raise their hands, record tallies on the board next to the appropriate group number and time segment.

7. After two minutes, ask everyone to stop producing name tents and discuss the following:

   - Did any students find it very difficult to produce name tents? *(students in Group 4)* Why? *(Standing and folding with one hand—the nondominant hand—made it nearly impossible.)*

   - Ask students in each group what difficulties they encountered making the name tents. *(Group 1: hard to fold with one hand, very hard to fold using only nondominant hand, difficult to write with nondominant hand; Group 2: hard to fold with one hand; Group 3: few difficulties; Group 4: hard to fold with one hand, very hard to fold with nondominant hand, very, very hard to fold standing up and difficult to write with nondominant hand)*

   - In general, which group of students finished most quickly? *(Group 3)* Why? *(Students in this group were able to use both hands and were able to remain seated.)*

   - In general, which group of students took the longest time to finish? *(Group 4)* Why? *(Students in this group had to use only the nondominant hand and had to stand.)*

8. Explain that **human capital** is the knowledge, talent and skills that people possess. Point out that people are able to invest in their human capital by going to school, pursuing additional training and developing skills.

9. This lesson is about earning and managing income. The process of managing income includes saving and investing for the future. An important investment that students make in their future is their **investment in human capital**—their efforts to acquire and improve human capital. There is a very strong correlation between the level of human capital a person possesses and the amount of income the person earns.

10. Explain that in the name tent activity, Group 4 represents those with the smallest investment in human capital—high school dropouts. Group 1 represents those who graduate from high school. Group 2 represents those who pursue additional training following high school—associate's degrees, bachelor's degrees or trade school. Group 3 represents those who pursue advanced degrees.

11. Ask the students how finishing name tents more quickly in the activity might relate to investment in human capital. *(Answers will vary, but students might recognize that people with more skills, education and training tend to be more productive.)*

    Point out that people with more skills, education and training tend to be more productive and, as a result, earn higher incomes.

12. Display *Visual 1.1- Education Pays* to emphasize the correlation between education and income earning potential. Point out that part of planning for their financial future is making a strong investment in their own human capital, which includes learning about earning and managing income.

    Ask the students what trends they notice?
    - *Direct relationship between education and earnings (i.e,. as one increases so does the other)*
    - *Indirect relationship between education and unemployment (i.e., as one increase the other decreases)*

13. Explain that people develop human capital throughout life. Learning to read and compute are examples. Learning personal finance content and skills is investment in human capital. Discuss the following and record student examples on the board:

    - Give examples of the human capital you possess—that is, the skills, talents and education that you have now. *(read, write, compute, play piano, play chess, draw, use various woodworking tools, ability to use a computer, ability to work with others, and so on)*

    - What investments did/do you make to develop and maintain this human capital? *(practiced reading, completed math homework, practiced piano, joined the chess*

club, attended a special art class, attended a computer class, made furniture and other wood items, and so on)

- If you want to own your own business in the future, what human capital might you need? *(management skills, accounting skills, computer skills, communication skills, etc.)*

- What investments might you make to develop this human capital? *(pursue a college degree in business or accounting, read professional journals, shadow someone who owns a business, etc.)*

14. Review the key points of this lesson by discussing the following:

    - What is human capital? *(the knowledge, talent and skills that people have)*

    - What is investment in human capital? *(efforts to acquire and improve human capital)*

    - How do people invest in human capital? *(education, training and practice)*

    - In general, how does investment in human capital—through education—affect income? *(The more education, the greater income people earn.)*

Homework

15. Distribute copies of *Handout 1.1 – Homework*. Have the students read the article "Investing In Yourself: An Economic Approach to Education Decisions" and answer the included questions. This can be done as an individual activity or in small groups. Answers to the discussions questions are provided in *Handout 1.2 – Teacher's Guide*.

Handout 1.1 - Homework

Investing in Yourself: An Economic Approach to Education Decisions

Scott A. Wolla, *Senior Economic Education Specialist*

"When I travel around the country, meeting with students, business people, and others interested in the economy, I am occasionally asked for investment advice…I know the answer to the question and I will share it with you today: Education is the best investment."
—Federal Reserve Chairman Ben S. Bernanke, September 24, 2007[1]

One of the most important investment decisions you will ever make is the decision to invest in yourself. You might think that **investment** is only about buying stocks and bonds, but let's take a step back and consider investment a little differently. Economists use the word **investment** to refer to spending on **capital**, which can be either physical capital (tools and equipment) or human capital (education and training). Let's briefly look at each type.

Investing in Physical Capital

A firm invests in itself by buying capital that it uses to improve what it does. In other words, it invests in physical capital to earn higher profits in the future. For example, a firm might invest in new technology to increase the **productivity** of its employees. The increased productivity raises future revenue (income earned by the firm) and **profits** (revenue minus costs of production). Seems like an easy decision, right? Well, before a firm invests in physical capital, it must consider three very important points.

First, a firm invests in technology now with the expectation that it will lead to higher revenue and expected profits in the future. But this expectation might not be realized. For example, the technology might not increase productivity as much as the firm expected. Or the demand for the good the firm produces might decrease, resulting in less revenue than expected.

Second, a firm considers other investment alternatives. A firm can invest in many ways to raise future profits. For example, maybe investment in technology A results in profits, but investment in technology B, which is more expensive, leads to much larger profits.

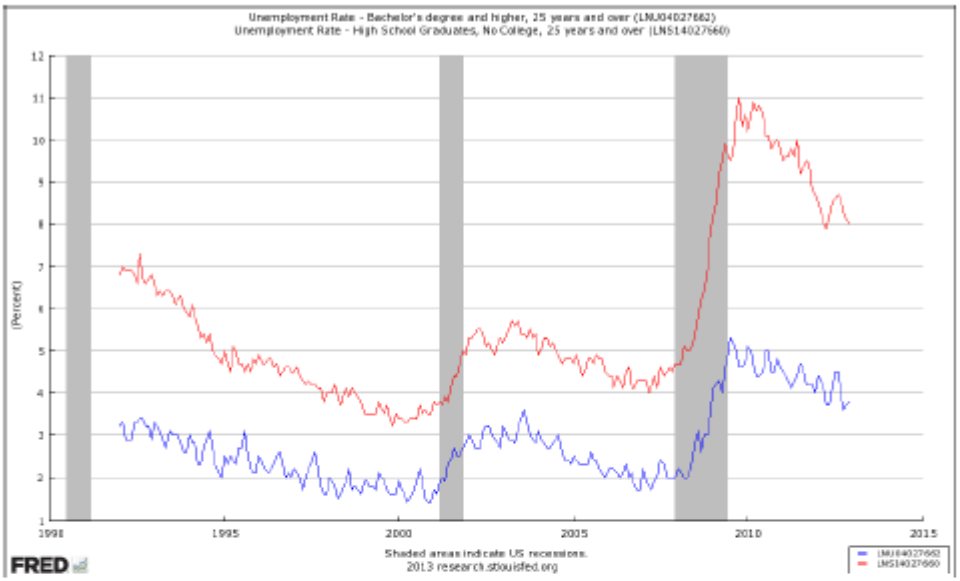
Third, a firm also considers the potential **return on investment (ROI)**. The ROI is a performance measure of the effectiveness of an investment. It is calculated as the net gain (gain from investment minus cost of investment) divided by the cost of investment. A firm compares the expected gain with the investment cost to make a sound decision. Of course, the result of any investment lies in the future and must be projected. Predicting the future is always tricky; therefore, any uncertainty about the result must also be considered.

Investing in Human Capital

Investment in human capital is the effort that people expend to acquire education, training, and experience. People invest in their **human capital** for the same reason a firm invests in physical capital: to increase productivity and earn higher income. An added benefit is the increase in job

Handout 1.1 – Homework cont.

opportunities for those with more education: The unemployment rate for those with a bachelor's degree is 4.1 percentage points lower than for those with only a high school diploma (see the first graph). Of course, higher education is expensive. To increase the likelihood that the investment will pay off, let's consider three points.



NOTE: In December 2011, the unemployment rate for those 25 years of age and older with at least a bachelor's degree (blue line) was less than half that for high school graduates of the same age with no college (red line).

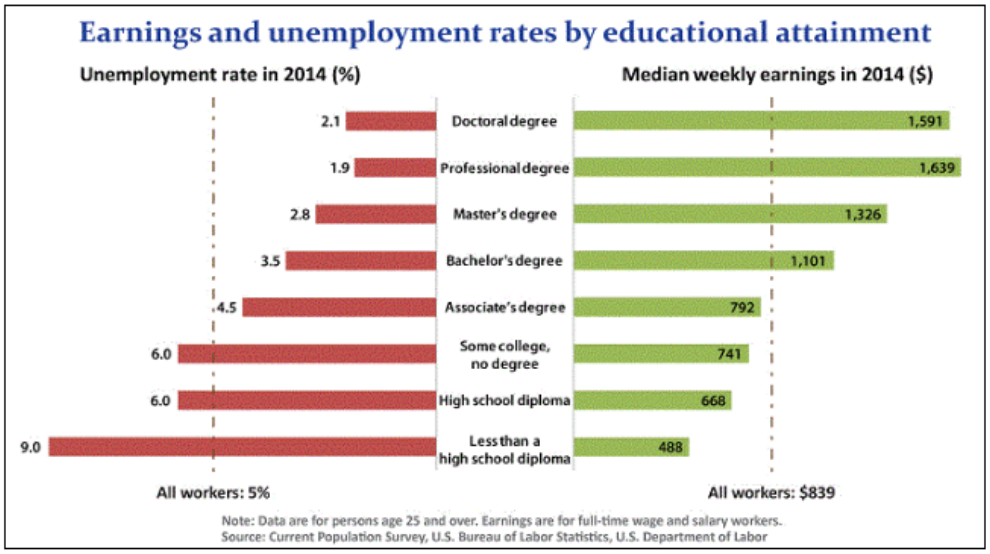
SOURCE: Federal Reserve Bank of St. Louis FRED.

First, an investment in human capital might not pay off. Just as a firm's investment in physical capital involves risk, there is also a risk that the expected outcome from investing in human capital will not be realized. Research consistently shows a correlation between more education and higher income (see the second graph), but there is no guarantee. One way to think about the ROI in human capital is the *college wage premium*, which is the percent increase in earnings of those with a bachelor's degree compared with those with only a high school diploma. Recent research suggests that the college wage premium has been growing—from 40 percent in the late 1970s to 84 percent in 2012.[2]

Second, people should consider what kind of an investment to make. Getting an education will most likely lead to higher income, but there are vast differences in the projected income and job opportunities of the various courses of study available. For example, according to the Bureau of Labor Statistics (BLS), an elementary schoolteacher with a four-year degree earned $51,380 (median) in 2010,[3] while a computer programmer with a four-year degree earned $71,380 (median) in 2010.[4] Both earned a higher income than they would have if they had not acquired a college degree, but the difference between the median earnings is significant.

The job opportunities available in different professions also vary. The BLS forecasts job outlooks for various occupations. For mechanical engineers (2010-20), the BLS forecasts job growth of 9 percent,[5] while for registered nurses job growth of 26 percent is expected.[6] Again, there is a signifi-

Handout 1.1 – Homework cont.



cant difference. Given these facts, does that mean that you should not become an elementary schoolteacher? Does it mean that you should consider only computer programming or nursing? No, but the median income and the expected job growth rate are two factors to consider when making decisions about future education and training. In fact, there are many opportunities to gain training and valuable job skills besides the usual college route. Vocational, technical, and trade schools teach specific, practical jobs skills that can lead to a good job within 2 to 4 years. For example, many such schools offer programs in computer-aided design and drafting (CADD); law enforcement; heating, ventilation, and air conditioning (HVAC); and information technology (IT).

Third, people should consider the cost of various kinds of educational institutions when they think about investment in education. For example, the average cost of attending a four-year public university (tuition, room, and board) from 2007 to 2011 was $58,623, while the average cost at a four-year private university for that same period was $125,604.[7] Does that mean you should consider only public universities? No, but cost should be considered in making your decision. The ROI for a would-be elementary schoolteacher would be higher if he or she chose to attend a four-year public university.

Conclusion

A firm invests in physical capital in an attempt to increase its revenue (income) and potential profit, but only after considering the return on investment. People might consider using a similar strategy when deciding whether and how to invest in their own human capital. ■

Handout 1.1 – Homework cont.

NOTES

[1] Bernanke, Ben S. "Education and Economic Competitiveness." Speech presented at the U.S. Chamber Education and Workforce Summit, Washington, D.C., September 24; 2007; www.federalreserve.gov/newsevents/speech/bernanke20070924a.htm.

[2] Jonathan, James. "The College Wage Premium." Federal Reserve Bank of Cleveland *Economic Commentary*, 2012, No. 2012-10, August 8, 2012; www.clevelandfed.org/research/commentary/2012/2012-10.cfm.

[3] Bureau of Labor Statistics. "Kindergarten and Elementary School Teachers." *Occupational Outlook Handbook*, March 29, 2012a; www.bls.gov/ooh/education-training-and-library/kindergarten-and-elementary-school-teachers.htm.

[4] Bureau of Labor Statistics. "Computer Programmers." *Occupational Outlook Handbook*, March 29, 2012b; www.bls.gov/ooh/computer-and-information-technology/computer-programmers.htm.

[5] Bureau of Labor Statistics. "Mechanical Engineers." *Occupational Outlook Handbook*, March 29, 2012c; www.bls.gov/ooh/architecture-and-engineering/mechanical-engineers.htm.

[6] Bureau of Labor Statistics. "Registered Nurses." *Occupational Outlook Handbook*, March 29, 2012d; www.bls.gov/ooh/healthcare/registered-nurses.htm.

[7] National Center for Education Statistics. "Fast Facts: Tuition Costs of Colleges and Universities." See http://nces.ed.gov/fastfacts/display.asp?id=76.

GLOSSARY

Capital: Goods that have been produced and are used to produce other goods and services. They are used over and over again in the production process.

Human capital: The knowledge and skills that people obtain through education, training, and experience.

Investment: The purchase of physical capital goods (e.g., buildings, tools and equipment) that are used to produce goods and services.

Investment in human capital: The efforts people put forth to acquire human capital. These efforts include education, training, and experience.

Productivity: The ratio of output per worker per unit of time.

Profit: The amount of revenue that remains after a business pays the costs of producing a good or service.

Return on Investment (ROI): A performance measure of the effectiveness of an investment. ROI is calculated as the net gain (gain from investment minus cost of investment) divided by the cost of investment.

Handout 1.1 – Homework cont.

Name_____ Period_____

Federal Reserve Bank of St. Louis *Page One Economics Newsletter*:
"Investing in Yourself: An Economic Approach to Education Decisions"

After reading the article, answer the following questions.

1. Why does a firm invest in physical capital?

2. Why do people invest in human capital?

3. How does the average unemployment rate differ for those with more education?

4. What is the college wage premium, and what has been its trend in recent decades?

5. Explain why it is important to consider the income earning potential of various college degree programs.

6. When considering an investment, it is important to also think about the cost. What is the average difference in the cost of attending a public versus a private university?

Handout 1.2 – Teacher's Guide

Teacher's Guide

Federal Reserve Bank of St. Louis *Page One Economics Newsletter*:
"Investing in Yourself: An Economic Approach to Education Decisions"

After reading the article, answer the following questions.

1. **Why does a firm invest in physical capital?**

   A firm invests in physical capital to increase the productivity of its employees. The increased productivity raises future revenue (income earned by the firm) and profits (revenue minus costs of production).

2. **Why do people invest in human capital?**

   People invest in their human capital (themselves) for the same reason a firm invests in physical capital: to increase productivity and earn higher income. An added benefit to investing in human capital is the increase in job opportunities for those with more education.

3. **How does the average unemployment rate differ for those with more education?**

   The unemployment rate for those with a bachelor's degree is 4.1 percentage points lower than for those with only a high school diploma.

4. **What is the college wage premium, and what has been its trend in recent decades?**

   The college wage premium is the percent increase in earnings for those with a bachelor's degree compared with those with only a high school diploma. Recent research suggests that the college wage premium has been growing—from 40 percent in the late 1970s to 84 percent in 2012.

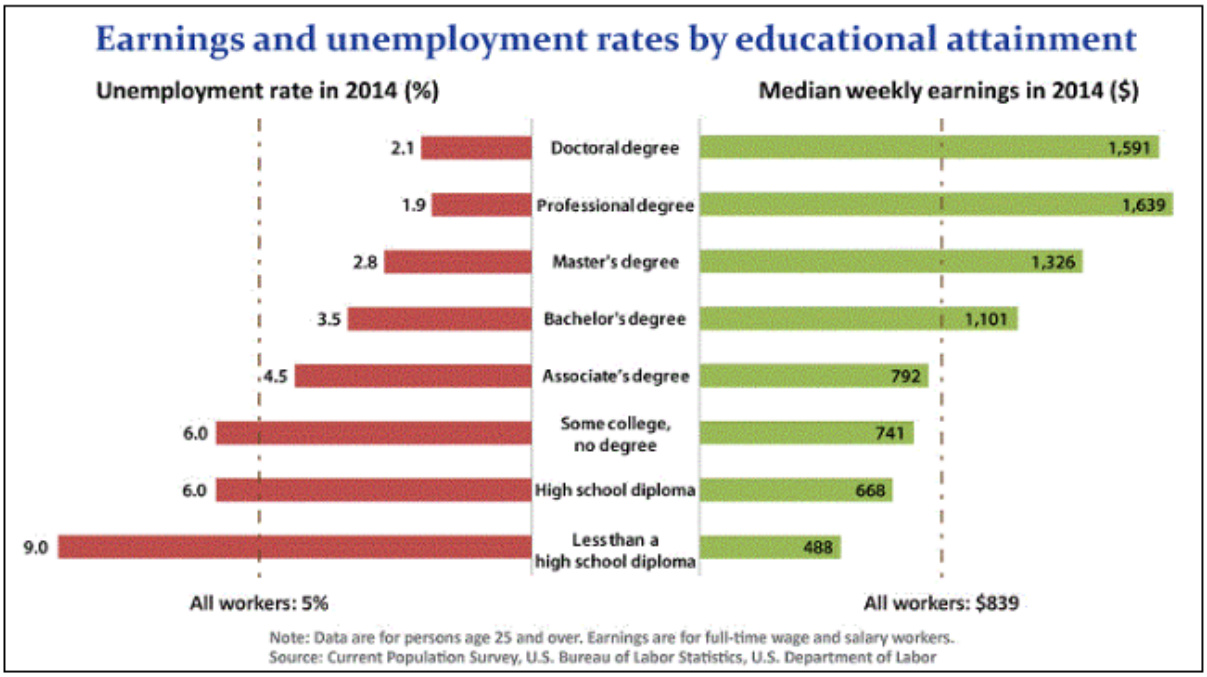
5. **Explain why it is important to consider the income earning potential of various college degree programs.**

   Getting an education will most likely lead to higher income, but there are vast differences in the projected income and job opportunities of the various courses of study available. For example, an elementary school-teacher with a four-year degree earned $51,380 (median) in 2010, while a computer programmer with a four-year degree earned $71,380 (median) in 2010. Students should also consider vocational, technical, and trade schools.

6. **When considering an investment, it is important to also think about the cost. What is the average difference in the cost of attending a public versus a private university?**

   The average cost of attending a four-year public university (tuition, room, and board) from 2007 to 2011 was $58,623, while the average cost at a four-year private university for that same period was $125,604.

Visual 1.1- Education Pays



Saving

Lesson 2: Savvy Savers

Lesson Description
Students calculate compound interest to identify benefits of saving in interest-bearing accounts. They learn the "rule of 72" and apply it to both investments and debt. They learn that there is a relationship between the level of risk for an investment and the potential reward or return on that investment.

Concepts
Compound interest
Interest
Non-interest bearing account
Principal
Risk-reward relationship
Rule of 72
Saving

Objectives
Students will:

- Explain the difference between a non-interest bearing account and an interest-bearing account.
- Calculate interest compounded semiannually.
- Explain and demonstrate the Rule of 72.
- Describe the risk-reward relationship.

Time Required
45 minutes

Materials

- A copy of Handouts 2.1 for each student
- Visuals of Handout 2.1—Answer Key
- A calculator for each student

Procedures

1. Begin by asking students the following:

    - What does it mean to be a saver? (*Answers may vary but may include not spending all of one's income, having money left after paying expenses, income greater than expenses, etc.)*

- What do you suppose it means to be a savvy saver? *(Answers may vary but may include being a smart saver, knowing about places to save one's money, knowing about different savings accounts, etc.)*

2. Explain that saving is income not spent. Distribute *Handout 2.1: Maria's Saving Decision* to all students and explain that they may see the difference between a saver and a savvy saver when they examine Maria's story. Call on a student to read aloud the first paragraph of Handout 2.1.

3. Explain the following:
   - A **non-interest bearing account**, or zero-interest account, is one in which no interest is paid on the **principal**—that is, the amount of deposit or account balance.

   - **Interest** is the price of using someone else's money.
     - Saving v. Borrowing: When people save their money in a bank, the bank uses the money to make loans to others. In return, the bank pays the account holder interest. There are various types of interest bearing accounts depending on the amount of interest and how often the interest is paid.

       Conversely, when people borrow money, they must pay the bank (or lending institution) interest, in addition to the principal (or original amount of the loan), in return for being able to use the money.

   - **Compound interest** means that interest is computed on the sum of the original principal and any accrued (accumulated or earned) interest. For example, an account that pays 5 percent interest "compounded semiannually" means that every six months half of 5 percent; that is, 2.5 percent, interest is paid on the principal and any accrued interest.
     - Saving v. Borrowing: Compound interest works FOR you when saving. Compound interest works AGAINST you when borrowing**.**

4. Show students how to calculate 5 percent interest compounded semiannually by going through Steps 1 – 5 in the prompt and demonstrating the answers to problems #1 through #2 on Handout 2.1. (Refer to Handout 2.1: Maria's Savings Decision—Answer Key for answers.)

5. Distribute a calculator to each student, or ask them to use the calculator function on their cell phones, and instruct students to complete Handout 2.1 (problem #3) on their own or in small groups.

6. Display a visual of Handout 2.1 and go over answer #3 on the handout. After reviewing all of the questions on Handout 2.1, ask students the following:

   - What is a non-interest bearing account? *(an account or deposit on which a bank does not pay interest on the principal)*

- What could Maria have bought with the $50.62 of interest she might have earned on her savings? *(Answers may vary.)*

- Would you classify Maria as a saver or a savvy saver? *(saver)* Why? *(She didn't invest her money in a way that would give her a return on her investment, i.e. an account that pays interest on the principal.)*

- Why would anyone leave the $1,000 in a non-interest bearing account rather than putting it in an interest-bearing account? *(Answers may vary but may include that she was financially lazy—not proactive—or that she may not understand the importance of compound interest.)*

- Why is time; that is, the number of months you have your money in an interest bearing account—a very important factor in accumulating savings? *(Answers may vary but may include that the sooner you start saving, the sooner you start earning interest not only on your principal but also on accrued interest. Your money works for you over time.)*

7. Ask students the following questions:

   - How many of you would like for the amount of your savings to double over a period of years? *(Answers may vary, but most students will likely want their amount of savings to double.)*

   - How long would it take for Maria's $1,000 to double if she kept the money in a non-interest bearing account? *(It would never double.)* How long do you think it will take for Maria's $1,000 to double if she puts the money in a savings account that pays compounded interest? *(Answers will vary.)*

8. Tell students that you are going to show them the **Rule of 72**, which is an easy way to estimate how long it will take their money to double at a certain interest rate. Tell students that in order to determine how long it will take their money to double at a certain interest rate they should divide 72 by the interest rate. For example, 72 ÷ 5 = 14.4. Therefore the principal in a savings account that pays 5 percent interest will double in a little over 14 years. Explain that the Rule of 72 assumes people leave their money in an account without taking away from it or adding to it. It isn't an exact number, but it's close enough to serve as an estimate.

9. Go over the following examples, and make the corresponding point, with the class:

   - An investor who invests $1,000 in an account at an interest rate of 4% per year, will double his or her money in approximately how many years? *(18 years - the math: 72 ÷ 4=18)*

- A student takes a loan of $10,500 at an interest rate of 6.8%[1] per year to pay for school. Without paying down their debt, their debt will double in approximately how many years? *(about 10.5 years - the math: 72 ÷ 6.8 = 10.5)*

Point out to the students that if they graduate with an associate's degree and $21,000 in student loan debt (i.e., two years taking the maximum amount of $10,500), they will need to make $29,004 a year in order to pay off their debt in 10 years. That is assuming 10% of their gross income goes to payment, which is $242 a month. Of course, it would take longer if they paid less each month or accumulated more debt while going to school.

10. Discuss the following:

- Does the amount of interest an account pays have much of an impact on how long it will take for your money to double? *(Yes, the higher the interest rate the more quickly your money will double. The lower the interest rate, the longer it will take your money to double)*

- Interest rates vary over time, but savings accounts are considered to be a safe way to save your money because for most savings accounts your principal is guaranteed. Interest rates for savings accounts generally pay in the 2 percent to 4 percent range, depending on current financial conditions in the economy. This reflects the risk-reward relationship.

- The **risk-reward relationship** is based on the concept that the higher the risk of loss of principal for an investment, the greater the potential reward of an increase in the principal or higher yield on the principal. And the lower the risk of loss of principal for an investment, the lower the potential reward of increased principal or higher yield on the principal. Therefore, savings accounts are considered very low risk; so, their reward, as compared with other investment options, is a relatively low "yield," or interest rate.

- The Rule of 72 applies not only to investments but also to debt, because it shows approximately how fast your debt will double at a certain rate of interest.

- What rate of interest do credit card companies charge? *(Answers will vary.)*

- Credit card rates of interest vary over time and under different financial conditions in the economy, but generally credit card companies charge a relatively high rate of interest. Credit card companies can charge a high rate because the card companies bear risk when lending funds to their cardholders.

- If a credit card company charges an interest rate of 18 percent, approximately how long would it take for your debt to double if you made no payment on the debt? *(4 years – the math 72 ÷ 18 = 4)*

[1] 2012 – 2013 Interest Rate for Subsidized Stafford Loans (Undergraduate Students)

11. Review the key points of this lesson by discussing the following:

- What is a non-interest bearing account? *(an account that pays zero interest on the principal)*

- What is interest? *(the price of using someone else's money)*

- What is compound interest? *(Interest is paid on the principal and also on the accrued interest at specific time intervals.)*

- What level of interest would you expect a safe account or investment that is low risk to pay—low, medium or high—and why? *(low because of the risk-reward principal)*

- What does the Rule of 72 indicate? *(The rule shows how long it takes to double your money—or your debt—given a specified rate of interest.)*

- Why do the rates that credit card companies charge tend to be high? *(Because the risk that the loans the card companies make to cardholders will not be repaid is relatively high.)*

12. To conclude, show the video No-Frills Money Skills: Growing Money – Compound Interest – Episode 1. Available at www.stlouisfed.org/education_resources/no-frills-money-skills/episode-1-growing-money/

Handout 2.1 - Maria's Savings Decision

One year ago, Maria's grandmother passed away and she received $1,000 from her grandmother's estate. Maria was going to college in two years and she knew her grandmother would want her to save the money to use towards her college education. She deposited the money in her checking account for which she was paid no interest. She had considered putting the $1,000 in a savings account that paid 5 percent interest compounded semiannually, but she never got around to it.

How much money did Maria lose by leaving her $1,000 in a non-interest bearing account for 12 months? The steps below show how to find the answer:

1. Convert annual interest rate (5%) to decimal (.05)
2. Divide annual interest rate (stated as decimal) by two to change it to semiannual. (i.e., .05 ÷ 2 =.025)
3. Multiply the principal by the interest rate to get the interest paid in dollars. (i.e., $1,000 × .025 = $25.00)
4. Add principal and interest to get new amount of principal. (i.e., $1,000 + $25.00 = $1,025)
5. Record new level of principal and repeat the process from Step 3.

Months	Principal (p)	Interest (i)	p + i
6	$1,000.00	*$25.00*	*$1,025.00*
12	*$1,025.00*	*$25.63*	*$1,050.63*

1. Fill in the following chart, to compare the two savings options mentioned in the prompt:

Type of account	Original Principal	Interest after 12 months	Total principal and interest after 12 months
Zero-interest checking account	$1,000.00	$	$
5% compounded semiannually	$1,000.00	$	$

2. Maria lost $_____ by keeping her money in a non-interest bearing account rather than putting it in an account that paid 5 percent compounded semiannually.

Handout 2.1 - Maria's Savings Decision cont.

3. Now, complete the chart through three years. You have the answers for months 6 and 12 above to check your initial work. Round your answers to the nearest hundredth (or two decimal places) and remember that the principal will change each time interest accrues.

Months	Principal (p)	Interest (i)	p + i
6	$1,000.00	$	$
12	$	$25.63	$
18	$	$	$
24	$ 1,076.90	$	$
30	$	$27.60	$
36	$	$	$

Handout 2.1 - Maria's Savings Decision – Answer Key

One year ago, Maria's grandmother passed away and she received $1,000 from her grandmother's estate. Maria was going to college in two years and she knew her grandmother would want her to save the money to use towards her college education. She deposited the money in her checking account for which she was paid no interest. She had considered putting the $1,000 in a savings account that paid 5 percent interest compounded semiannually, but she never got around to it.

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1. Convert annual interest rate (5%) to decimal (.05)
2. Divide annual interest rate (stated as decimal) by two to change it to semiannual. (i.e., .05 ÷ 2 =.025)
3. Multiply the principal by the interest rate to get the interest paid in dollars. (i.e., $1,000 × .025 = $25.00)
4. Add principal and interest to get new amount of principal. (i.e., $1,000 + $25.00 = $1,025)
5. Record new level of principal and repeat the process from Step 3.

Months	Principal (p)	Interest (i)	p + i
6	$1,000.00	*$25.00*	*$1,025.00*
12	*$1,025.00*	*$25.63*	*$1,050.63*

1. Fill in the following chart, to compare the two savings options mentioned in the prompt:

Type of account	Original Principal	Interest after 12 months	Total principal and interest after 12 months
Zero-interest checking account	$1,000.00	*$0*	*$1,000.00*
5% compounded semiannually	$1,000.00	*$50.63*	*$1,050.63*

2. Maria lost $__*50.63*__ by keeping her money in a non-interest bearing account rather than putting it in an account that paid 5 percent compounded semiannually.

Handout 2.1 - Maria's Savings Decision – Answer Key cont.

3. Now, complete the chart through three years. You have the answers for months 6 and 12 above to check your initial work. Round your answers to the nearest hundredth (or two decimal places) and remember that the principal will change each time interest accrues.

Months	Principal (p)	Interest (i)	p + i
6	$1,000.00	*$25.00*	*$1,025.00*
12	*$1,025.00*	$25.63	*$1,050.63*
18	*$1,050.63*	*$26.27*	*$1,076.90*
24	$1,076.90	*$26.92*	*$1,103.82*
30	*$1,103.82*	$27.60	*$1,131.42*
36	*$1,131.42*	*$28.29*	*$1,159.71*

Credit

Lesson 3: Credit Cards- A Package Deal

Lesson Description
Students learn about credit card usage statistics from 2013 study conducted by Sallie Mae, the nation's largest student loan provider, called *How America Pays for College*. They also see common credit card usage statistics and discuss those. Finally, they go over the top credit card incentive programs for college students and learn the role incentives play in attracting people to a particular credit card.

Concepts
Collateral
Credit
Credit card
Incentives
Interest
Unsecured loan

Objectives
Students will:

- Distinguish between a secured and unsecured loan.
- Explain why interest rates are higher for unsecured loans.
- Recognize different types of credit cards.
- Discuss how incentives play a role in credit cards use.
- Examine incentives specific to college students.

Time Required
30 minutes

Materials
Visuals 3.1 and 3.2

Procedures

1. Define **credit** as the ability of a consumer to obtain goods or services before payment, based on an agreement to pay later. Explain that using a credit card is one form of credit and choosing and using credit cards are important components of personal finance. Explain that students will learn strategies for handling credit cards responsibly.

2. Tell the students that credit card usage is a subject of much interest. The following information is provided from a 2013 study conducted by Sallie Mae, the nation's largest student loan provider, called *How America Pays for College*:

- Thirty percent of all undergraduate students reported having a credit card in 2013.

- Only 14 percent of freshmen report having a credit card, but 47 percent of seniors report having a credit card.

- Students who live in the West are more likely to carry cards (37 percent) than students living in the Northeast and South (26 percent and 27 percent respectively); 30 percent of students in the Midwest carry credit cards.

- White students (33 percent) are more likely to have credit cards than Hispanic or African-American students (22 percent and 24 percent respectively).

- There is no significant difference in credit card ownership by income level: 34 percent of high-income students, 28 percent of middle-income students, and 32 percent of low-income students carry credit cards.

- More than six in 10 (62 percent) pay off all cards each month.

- Another 33 percent pay at least the minimum required payment each month with most paying more than the minimum.

- Only 1 percent pay less than the minimum required each month.

3. Explain the following information about credit cards.

- A **credit card** represents an agreement between a lender—the institution issuing the card—and the cardholder. It is a convenient form of borrowing with a revolving line of credit. This means it can be used repeatedly to buy products or services, up to a specific dollar amount. The credit card company determines this dollar amount based on a credit card holder's credit history.

- Credit cards can be called "easy access" credit because they are relatively easy to acquire.

- Credit card holders receive a monthly statement from the credit card issuer that includes a list of purchases and payment information from their credit card issuer. Credit card holders must pay a minimum amount each month to avoid fees. The minimum payment required is determined by the credit card company and is printed on the monthly statement.

- **Interest** is the price of using someone else's money. Credit card holders use the credit card issuer's money to make purchases. If the cardholder does not pay the full statement amount by the due date, the credit card companies add interest to the balance the cardholder owes.

- A credit card is an **unsecured loan**. This means that it is a loan that is not backed with collateral. **Collateral** is property required by a lender and offered by a borrower as a guarantee of payment on a loan. It is a borrower's savings, investments or the value of the asset purchased (i.e., car, house), which the lender can seize if the borrower fails to repay a debt.

- From the lender's perspective, an unsecured loan is quite risky. This means that the possibility that the borrower may not repay is very high. Therefore, the interest rate on credit cards is often high.

4. Explain that there are different kinds of credit cards. Some are major credit cards and can be used at any business that accepts credit cards. These credit cards are issued by banks. The credit card companies manage credit card services for banks, such as accepting and approving credit card applications, approving credit card purchases and advertising credit cards and their features. Credit card companies make money by charging a fee with each credit card transaction. Mastercard and Visa are major credit card companies. Ask students to name some advantages of these cards. *(Answers may vary but should include using one card for all purchases, having only one bill to pay, not having to carry a lot of money and still being able to make purchases, being able to buy something now and pay for it later.)*

5. Explain that some retailers have a store-branded credit card. This is a strategy to encourage shoppers to spend more in their stores. These retail credit cards typically charge higher interest rates than other cards, but may give special discounts for card users. Ask students to name some retail credit cards. *(Accept any major retail store such as Target, Sears, and J.C. Penney.)*

6. Display *Visual 3.1: Did You Know*. Discuss the facts displayed on the visual:

   - Approximately what percentage of Americans "threw currency away" because of the way in which they used their credit cards? *(the 40 percent that carried a balance on their cards)*

   - Why has the total amount of money charged in credit card penalty fees increased? *(There has been a rise in credit card debt. More people have failed to pay their credit cards according to the terms of the card.)*

   - Why would credit card companies continue to send credit card offers to customers who were already deeply in debt? *(Answers may vary but should include discussion about the fact that credit card companies earn a fee for each credit card transaction and they earn interest when cardholders fail to pay the entire balance each month.)*

   - Which group of customers do you think credit card companies prefer—the 60 percent that pay the balance in full each month or the 40 percent that carry a balance from month to month? *(Credit card companies prefer the 40 percent group*

because they earn revenue from the interest charged to those who don't pay off their balances.)

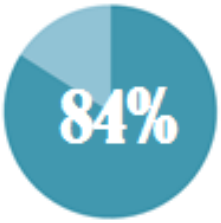
7. Define **incentives** as perceived benefits that encourage certain behaviors. Inform the class that credit card companies are competitive, and they often offer incentives to entice consumers. The incentives may be promotional low interest rates, special store discounts, reward programs that allow card holders to accumulate and redeem points for merchandise, free air travel or cash rewards. Consumers have many choices, and not all credit cards have incentives.

8. Display *Visual 3.2: Things to Consider When Choosing a Credit Card* and point out that according to a 2012 National Financial Capability Study conducted by the FINRA Foundation, 61 percent of those surveyed do not compare credit card offers when choosing a credit card. Explain that comparing credit cards offers can save consumers money and provide other rewards. Discuss some of the possible options for making comparisons listed in the visual.

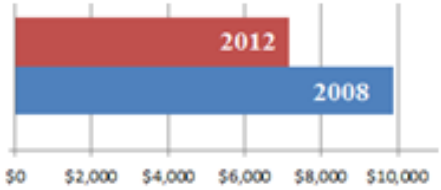
9. Review the important content in the lesson by asking the following questions:
   - What is credit? *(the ability of a consumer to obtain goods or services before payment, based on an agreement to pay later)*
   - What are credit cards? *(a convenient form of borrowing with a revolving line of credit)*
   - What is interest? *(Interest is the price of using someone else's money.)*
   - When do credit card holders pay interest? *(when they don't pay the balance on the card in full each month)*
   - Why do credit card holders pay interest? *(because they are borrowing from credit card companies, they are using someone else's money—the credit card companies'.)*
   - What are incentives? *(Incentives are perceived benefits that encourage certain behaviors.)*
   - What is an unsecured loan? *(a loan not backed by collateral)*
   - What is collateral? *(property required and offered as a guarantee of payment on a loan)*
   - Is a credit card a secured or unsecured loan? *(unsecured)*
   - Why are interest rates higher for unsecured loans? *(These are riskier loans. The lender has no guarantee of property if the loan isn't repaid.)*

10. As a suggested follow-up, have students review how to read a credit card disclosure statement and a credit card payment statement with *Personal Finance 101: Financial Forms Explained* available at http://stlouisfed.org/education_resources/financial-forms-explained-credit-card-statement/

Visual 3.1 – Did You Know?



84% of students in the US have credit cards

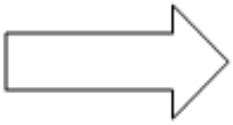


Average credit card debt among low- and middle-income households totaled **$7,145 in 2012**, down from $9,887 in 2008

Most Americans have **four** credit cards in their wallet

The average age at which a U.S. consumer first adopted a credit card is **20.8** years old.

About 60% of all U.S. consumers always or usually pay off their credit card bills in full each month



About 40% of Americans carry a balance on their cards from month to month

SOURCES: Weiss, Gary. "Don't Get Clobbered by Credit Cards!" *Parade Magazine*, August 10 2008 and http://visual.ly/2012-us-credit-card-usage-statistics

Visual 3.2 – Things to Consider When Choosing a Credit Card

According to a 2012 National Financial Capability Study conducted by the FINRA Foundation, 61 percent of those surveyed do not compare credit card offers when choosing a credit card.

APR (Annual Percentage Rate)

Annual Fees

Late Payment Fees

Foreign Transaction Fee

Rewards

- Cash Back
- Gasoline, airline travel, hotel rooms

Promotional Offers

- A certain amount of cash back after you spend a certain amount
- 0% Balance Transfer Fee
- 0% APR for 12 months

Lesson 4: Creditors' Criteria and Borrowers' Rights and Responsibilities

Lesson Description
Students discuss key terms related to credit and learn how creditors use capacity, character and collateral as criteria for making loans. Students learn about credit rights and responsibilities.

Concepts
Capacity
Character
Collateral
Credit
Creditor
Credit responsibilities
Credit rights
Interest

Objectives
Students will:

- Define credit and creditor.
- Define interest.
- Identify and describe criteria lenders use to make loans.
- Explain the rights and responsibilities related to using credit.

Time Required
30 Minutes (excluding Homework)

Materials

- Visuals 4.1, 4.2, and 4.3

Procedures

1. Define **credit** as the ability to obtain goods or services now while paying for them in the future. Explain that the ability to have and use credit is a privilege earned by exhibiting behaviors that are related to some broad characteristics that creditors consider when making lending decisions—character, capacity and collateral. Ask the students what they think these terms mean. *(Answers will vary.)*

2. Remind the students that credit is not free. People pay a price for using credit— interest. **Interest** is the price of using credit—that is, the price of using someone else's money. Interest is an expense to the borrower, and it is income to the lender. If people borrow money from a bank, they pay interest to the bank because they are using the money deposited in the bank by others. Those who deposit their money in the bank receive interest as payment for allowing others to use their money.

3. Tell the students that, in addition to interest, people also pay fees for using credit.

There may be fees charged to service and maintain credit accounts and other fees if a loan is not paid on time.

4. Tell the students that when they apply for credit, the **creditor**, i.e., the person, financial institution or business that lends the money, will look at different types of information about the borrower. Often creditors review information to determine how well a borrower satisfies the three C's of credit. These are criteria that the creditor uses to evaluate potential borrowers: **Capacity, Character** and **Collateral**.

5. Display *Visual 4.1: The 3 C's of Credit*. Explain that the creditor is interested in the answers to the following three questions:
   - Capacity – Does the borrower have the ability to repay the loan? Factors that affect a borrower's ability to repay the loan include how much money the borrower makes, how long the borrower has been at his or her current job and how much debt the borrower already has relative to income.

   - Character – Will the borrower repay the loan? The primary factor that affects character is the borrower's past bill-paying history. The creditor wants to know if the borrower has paid his/her bills and if he/she has paid them on time.

   - Collateral – Is there a financial asset or a piece of property that a creditor can take if the borrower fails to repay the loan? Collateral provides protection for the creditor if the borrower fails to repay the loan. For example, if a borrower fails to repay a car loan, the creditor can repossess the car. The car is collateral for a car loan.

6. Remind students that people earn the privilege of using credit and that this privilege is based to a great extent on their character, capacity and collateral. Consumers should be aware of another key factor, though—with this privilege comes consumer credit rights and responsibilities. **Credit rights** refer to the protections put in place by law to help people obtain and maintain credit. **Credit responsibilities** are the actions or behaviors in which people should engage when they use credit. Distribute a copy of *Visual 4.2: Your Credit Rights* and *Visual 4.3: Your Credit Responsibilities* to each student. Review the statements on the handouts with the students.

7. Review the key points of the lesson by discussing the following:
   - What is credit? *(the ability to obtain goods and services now while paying for them in the future)*

   - Who are creditors? *(people, financial institutions or businesses that lend money)*

   - What is interest? *(the price of using someone else's money, the price of credit, a fee for the use of money over time)*

   - What is capacity? *(the borrower's ability to repay a debt)*

- What are factors that affect a borrower's capacity? *(level of income, length of time on the job, how much debt the borrower has relative to income)*

- What is character? *(the borrower's willingness to repay the debt and the borrower's reputation for paying bills and debts based on past behavior)*

- What is collateral? *(an asset the creditor can take if the borrower doesn't repay the debt)*

- If you have a car loan, what serves as collateral? *(the car)*

- What are some of the rights we have when we use credit? *(Use* Visual 4.2: Your Credit Rights *to review the various rights.)*

- What are some of the responsibilities we have as we use credit? *(Use* Visual 4.3: Your Credit Responsibilities *to review the responsibilities.)*

Homework

8. For Homework the students should go through the online course Credit Cred. It is available at https://bts.stlouisfed.org/credit-cred/?p=yes

Visual 4.1: The 3 C's of Credit

CAPACITY

Refers to the ability of the borrower to repay the loan

CHARACTER

Refers to the willingness of the borrower to repay the loan

COLLATERAL

Refers to a financial asset such as savings or stocks or a purchased asset that the lender can seize if the borrower fails to repay the debt

Visual 4.2: Your Credit Rights

- You have the right to see your personal information on credit reports.
- Organizations that use credit reports are required to help you understand the report.
- You have the right to have errors in credit reports corrected.
- You have the right to know why you were denied credit. If you are denied credit because of something in your credit report, the lender must give you the name, address and telephone number of the credit bureau that provided the credit report.
- You have the right to know who has requested information about your credit history.
- Creditors cannot make decisions based on sex, national origin, marital status, color, race or age, nor can they ask for this information.
- Neither the length of the loan, i.e., the term, nor the interest rate may be changed for a fixed-rate loan.
- Lenders must notify you within 30 days of their decision to make a loan to you or not.

SOURCE: *What Your Credit Report Says about You and Your Credit Rating*, Federal Reserve Bank of Philadelphia

Visual 4.3 – Your Credit Responsibilities

- Pay your bills on time.
- Pay off your credit card balances in full each month.
- Compare offers for similar types of credit. For example, compare different credit card offers.
- Make informed choices about credit usage.
- Keep your receipts for purchases.
- Check monthly statements to make sure charges are correct.
- Know how much you can afford to spend.
- Understand that if a deal sounds too good to be true, it probably is.
- When you borrow money, know what you're agreeing to.
- Make certain that you know the interest rate and fees you are paying for a loan and the interest rate and fees associated with any credit card for which you apply.
- Notify credit card companies and financial institutions immediately when credit cards, debit cards or checks are lost or stolen.
- Don't ignore credit problems. Much of your credit history can remain on your credit report for seven years or more.

SOURCE: What Your Credit Report Says about You and Your Credit Rating, Federal Reserve Bank of Philadelphia

Budgeting

Lesson 5: Your Budget Plan

Lesson Description
Students will learn the components of budgeting and work to create a budget for a friend based on a prompt. Students will then complete their own monthly budget using the template provided in the lesson.

Concepts
Budget
Expenses
Income

Objectives
Students will:

- Define budget, income and expenses.
- Identify principles of effective budgeting.
- Create a budget.

Time Required
15 minutes

Materials
A copy of Handouts 5.1 and 5.2 for each student

Procedure

1. Write the word "budget" on the board and ask the students to write down three words or phrases that come to mind when they think about that term. Ask students to share various answers. (*Answers will vary but may include: spending, saving, money, spending plan or credit.)*

2. Explain that **budget** may be used as a noun or a verb. When it is used as a noun it means a plan for managing income and expenses. When it is used as a verb it means to plan or to manage income and expenses.

3. Write the word "income" on the board and ask students what the term means. (*Answers may vary but may include the money one makes, money received, job pay, etc.*). Tell the students that **income** is earnings or payment received for resources provided such as labor.

4. Write the word "expenses" on the board and ask students what the term means. (*Answers may vary but may include spending money, payments, costs, etc.*) Tell the students that **expenses** are costs incurred or the spending of money.

5. Distribute *Handout 5.1 - Aliya's Story* and have students follow the instructions to create a budget. Once complete, review the answers with the students.

   Handout 5.1 - Aliya's Story Answers:

   1. $168.43
   2. $210.94
   3. −$42.51
   4. Answers will vary, but could include some of the following:
      - Avoid ATMs that charge a usage fee/ use her own bank's ATM
      - Don't go to the movies / wait until the movie comes out on DVD
      - Don't buy refreshments at the movies
      - Don't buy CDs / Listen to the radio
      - See about lowering her cell phone bill. She could find a cheaper cell phone carrier or cut down on some of her services.
      - Don't buy luxury items like jewelry.

   5. Budgets may vary but expenses should not exceed income.

6. Distribute a copy of *Handout 5.2 - Create Your Own Budget* to students and ask them to create their own budget.

Handout 5.1- Aliya's Story

Aliya is one of your best friends. She keeps complaining that she runs out of money each month before she gets paid. She's asked you to help her make a budget based on her income from her part-time job. She handed you a crumpled paper with the following record of her income and expenses for last month.

2/1	Paycheck-Direct Deposit	$168.43
2/1	ATM cash + fee	$23.00
2/1	Movie and soft drink	$12.50
2/3	Gasoline	$22.97
2/5	Music CD	$17.99
2/10	Cell phone bill	$63.47
2/12	ATM cash	$40.00
2/15	Jewelry	$14.99
2/19	Gasoline	$16.02

1. What is Aliya's total income for the month?

2. What are Aliya's total expenses for the month?

3. What is the difference between Aliya's income and expenses?

4. What suggestions do you have for Aliya in order for her expenses to be less than her income? In other words, what expenses could she cut down on or eliminate?

5. Create a budget for Aliya below:

Date	Description	Income (+)	Expense (-)	Balance

My Monthly Budget Plan

EXPENSES (Monthly)			
HOME		FOOD	
Mortgage/Rent	$	Groceries	$
Taxes/Insurance	$	Eating Out	$
Repairs	$	FAMILY EXPENSES	
Association Fees	$	Day Care	$
UTILITIES		Child Support	$
Electric	$	Alimony	$
Gas	$	School tuition/fees	$
Water/Sewer	$	PERSONAL CARE	
Phone	$	Hair Cuts	$
Cable	$	Prescription medication	$
Internet	$	Toiletries/make-up	$
TRANSPORTATION		Clothing/shoes	$
Car payment	$	PETS	
Public Transportation	$	Food	$
Gas	$	Care (vet, grooming)	$
Car Insurance	$	ENTERTAINMENT	
Repairs/Maintenance	$	Books & magazines	$
INSURANCE		Movies/concerts	$
Disability	$	Music	$
Health Insurance	$	Hobbies	$
DEBT PAYMENTS (min. only)		Other	$
Credit Card #1	$	MISCANLEANOUS	
Credit Card #2	$	cleaning supplies	$
Student loans	$	tithes/donations	$
Other loans	$	Other	$
Subtotal:	$	Subtotal:	$
Grand Total:			$

INCOME (Monthly)	
Job #1	$
Job #2	$
Child Support	$
Alimony	$
Rental	$
Investment	$
Disability	$
Other	$
Other	$
Other	$
Total:	$

Total Expenses	$
Total Income	- $
Difference	

- If the number in the shaded box above is positive, then you have money left over at the end of each month. What are some smart money decisions you can do with the money left over?

- If the number in the shaded box above is negative, you are spending more than you make. What are some expenses you can cut back on? Why did you choose to cut back on those?

Handout 5.2- Create Your Own Budget

Glossary of Terms

Term	Definition
Borrowing	Taking money with a promise to repay the money in the future.
Budget	An itemized summary of probable income and expenses for a given period. A budget is a plan for managing income, spending and saving during a given period of time.
Capacity	A borrower's ability to repay debt.
Capital	Goods that have been produced and are used to produce other goods and services. They are used over and over again in the production process.
Character	A borrower's reputation for paying bills and debts based on past behavior.
Check-Cashing services	Businesses that provide services such as cashing all types of checks, including payroll, insurance, tax refund, settlement, and government and Social Security payments. These businesses may also provide other services, such as payday loans, money orders, and money wires.
Choice	A decision made between two or more possibilities or alternatives.
Collateral	Property required by a lender and offered by a borrower as a guarantee of payment on a loan. Also, a borrower's savings, investments or the value of the asset purchased that can be seized if the borrower fails to repay a debt.
Compound interest	Interest computed on the sum of the original principal and accrued interest.
Consumers	People who buy goods and services to satisfy their wants.
Cost	Things unfavorable to a decision-maker.
Credit	The granting of money or something else of value in exchange for a promise of future repayment.

Credit Card	Cards that represent an agreement between a lender—the institution issuing the card—and the cardholder. Credit cards may be used repeatedly to buy products or services or to borrow money on credit. Credit cards are issued by banks, savings and loan associations, retail stores, and other businesses.
Credit history	A person's payment activity over a period of time.
Credit report	A loan and bill payment history kept by a credit bureau and used by financial institutions and other potential creditors to determine the likelihood that a future debt will be repaid.
Credit responsibilities	Refers to the actions or behaviors in which people should engage when they use credit.
Credit rights	Refers to the protections put in place by law to help people obtain and maintain credit.
Creditor	A person, financial institution or other business that lends money.
Debt	Money owed in exchange for loans or for goods or services purchased with credit.
Expense	The costs people incur for goods and services. Expenses are often categorized as fixed, variable, and periodic. Fixed expenses are those that occur each month in a regular amount, such as rent, car payments, and mortgage payments. Variable expenses are those that change from one time period to the next, such as food, clothing, gasoline, and entertainment. Periodic expenses are those that occur several times a year, such as car insurance and life insurance payments.
Fees	Money charged to review your application for credit or to service your credit account, such as maintenance fees or late fees. Banks often charge fees for servicing bank accounts, including overdraft fees and charges for using a non-bank ATM.
Human capital	The knowledge and skills that people obtain through education, training, and experience.
Incentives	Perceived benefits that encourage certain behaviors.

Income	The payment people receive for providing resources in the marketplace. When people work, they provide human resources (labor) and in exchange they receive income in the form of wages or salaries. People also earn income in the forms of rent, profit, and interest.
Interest	The price of using someone else's money. When people place their money in a bank, the bank uses the money to make loans to others. In return, the bank pays interest to the account holder. Those who borrow from banks or other organizations pay interest for the use of the money borrowed.
Interest rate	The percentage of the amount of a loan that is charged for a loan. Also, the percentage paid on a savings account.
Investment	The purchase of physical capital goods (e.g., buildings, tools and equipment) that are used to produce goods and services.
Investment in human capital	The efforts people put forth to acquire human capital. These efforts include education, training, and experience.
Loan	A sum of money provided temporarily on the condition that the amount borrowed be repaid, usually with interest.
Non-interest bearing account	An account in which no interest is paid on the principal, which is the amount of deposit or account balance. Also called zero-interest account.
Principal	The original amount of money deposited or invested, excluding any interest or dividends. Also refers to the original amount of a loan without any interest.
Productivity	The ratio of output per worker per unit of time.
Profit	The amount of revenue that remains after a business pays the costs of producing a good or service.
Return on Investment (ROI)	A performance measure of the effectiveness of an investment. ROI is calculated as the net gain (gain from investment minus cost of investment) divided by the cost of investment.
Risk	The chance of loss.

Risk-reward relationship	The idea that there is a direct relationship between risk of the loss of principal and the expected rate of return. The higher the risk of loss of principal for an investment, the greater the potential reward. Conversely, the lower the risk of loss of principal for an investment, the lower the potential reward.
Rule of 72	A method to estimate the number of years it will take for a financial investment (or debt) to double its value (or cost). Divide 72 by the interest rate (percentage) to determine the approximate number of years it will take the investment (debt) to double its value (cost).
Saving	Not spending on current consumption or taxes. Saving involves giving up some current consumption for future consumption.
Unsecured Loan	A loan not backed with collateral.