FINANCIAL LITERACY

LESSON 8-24 ▲ LEARNING TO USE MONEY IN 8TH GRADE

**LEARNING GOALS/OUTCOMES**

* Calculate the impact of compound interest on borrowed and saved money.
* Create a simple budget for use of an imagined 8th grade income.
* Relate money management to the achievement of future career plans.

**MATERIALS NEEDED**

* **Student Handouts:**
* Compound Interest on Credit Card Debt
* Interpreting Compound Interest on Credit Card Debt
* Making an 8th Grade Budget
* Journal Page

**CLASSROOM ACTIVITIES**

1. **Students listen to a student discussion on credit cards.** Tell students to set up the room for a Fishbowl Think Aloud. This is where four or five chairs face each other in a small circle in the front of the classroom. It is used to listen to a discussion by four or five students discussing a topic. The rest of the class faces or surrounds the “fishbowl” listening attentively to the conversation. The purpose of the conversation is to “think aloud” about the following questions:

* What do you know about credit cards?
* How easy is it to get a credit card?
* How does making payments on a credit card work?
* Why should credit card companies give you money?
* What is the motivation for the company to give you a line of credit?

Invite four or five student ‘talkers’ to the fishbowl and let then discuss what they know about credit cards. After five minutes of discussion, remind students that last class they learned about interest as a way to earn money. In this lesson, they will learn about the costs of compounding interest for people who borrow money. Interest is not always their friend.

1. **Students discover the cost of compound Interest on credit card debt.** Put students into pairs. Distribute a copy of the *Compound Interests on Credit Card Debt* Handout and *Interpreting Compound Interests on Credit Card Debt* to each student. Take time to explain the graphs to students. The two data sets are for the same amount of money borrowed - $1000 with two different payment plans. The first data set is for $20 monthly payments, and the second is for $40 monthly payments. Tell student teams to review the tables and the graphs on Handout. Ask teams to answer the four questions associated with this portion of the lesson.

(Answer Key: (1) Borrower 1 $20, Borrower 2 $40, (2) Borrower 1: 78 months, Borrower 2: 30 months, (3) Borrower 1 - $570.66, Borrower 2 - $206.46, Borrower 1, because the borrower pays such a small amount each month, (4) The larger the monthly payment that a borrower makes, the faster the debt will be paid off and the less total interest he will have to pay off.)

When teams have completed answering the questions, ask select groups to share their answers to question four. Encourage students to understand that making smaller payments on credit card debt increases the time required to pay off the loan significantly. By increasing the monthly payment amount, the loan will be paid off much quicker and less total interest will be paid.

1. **Students create a simple 8th grade budget.** Distribute *Making an 8th Grade Budget* to each student. Have students continue working in pairs, each filling out an 8th Grade budget worksheet while working on it together. Review the ‘answers’ with the whole class. Take special time to hear how students would adapt the budget to get $20/week for spending money.
2. **Students relate effective youth budgeting to future career planning.** Ask students to return to their own desks. Lead a whole class discussion on how effective money management (‘budgeting’ effectively with their money) can support achievement of their career goals.   
     
   Ask students to imagine they were perfect at money management. How would a perfect teenaged money manager benefit later in life from their savings? Ask students to list benefits and write them on the board. Encourage students to recognize that they would have more money saved for their post-secondary education, they would go to school at less cost (no cost of borrowing), they would leave with less debt, they would select careers that provide the income they desire, they would only gain from interest rather than pay it out, they would be prepared financially for personal emergencies, they would know what income was required for them to lead a full life, etc.
3. **Students comment on their own motivations for effective money management.** Ask students to write responses to the following questions on their *Journal Page.*

* You see and hear about credit card offers everywhere. After having seen and learned about them in this lesson, how are you feeling about getting a credit card for yourself?
* On a scale of 1-10, how motivated are you for starting a savings account early and leaving it there for a while? Explain your answer with two reasons.
* After working on creating a budget, how motivated are you to establish a real budget for yourself? Explain your answer with two reasons.

**STUDENT PRODUCTS**

* **Completed *Interpreting Compound Interest on a Credit Card***
* **Completed *Making an 8th Grade Budget***
* **Completed *Journal Entry*** on readiness for personal money management

FINANCIAL LITERACY

LESSON 8-24 STUDENT HANDOUT

COMPOUND INTEREST ON CREDIT CARD DEBT

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Month** | **Amount** | **Monthly**  **Interest** | **Interest Charged** | **Amount Owed** | **Monthly Payment** | **Total** |
| 1 | **$1,000** | **1.25%** | $12.50 | $1,013 | **$20** | $993 |
| 2 | $993 | 1.25% | $12.41 | $1,005 | **$20** | $985 |
| 3 | $985 | 1.25% | $12.31 | $997 | **$20** | $977 |
| 4 | $977 | 1.25% | $12.22 | $989 | **$20** | $969 |
| 5 | $969 | 1.25% | $12.12 | $982 | **$20** | $962 |
| 6 | $962 | 1.25% | $12.02 | $974 | **$20** | $954 |
| 7 | $954 | 1.25% | $11.92 | $965 | **$20** | $945 |
| 8 | $945 | 1.25% | $11.82 | $957 | **$20** | $937 |
| 9 | $937 | 1.25% | $11.72 | $949 | **$20** | $929 |
| 10 | $929 | 1.25% | $11.61 | $941 | **$20** | $921 |
| 11 | $921 | 1.25% | $11.51 | $932 | **$20** | $912 |
| 12 | $912 | 1.25% | $11.40 | $924 | **$20** | $904 |
| 13 | $904 | 1.25% | $11.29 | $915 | **$20** | $895 |
| 14 | $895 | 1.25% | $11.19 | $906 | **$20** | $886 |
| 15 | $886 | 1.25% | $11.08 | $897 | **$20** | $877 |
| 16 | $877 | 1.25% | $10.96 | $888 | **$20** | $868 |
| 17 | $868 | 1.25% | $10.85 | $879 | **$20** | $859 |
| 18 | $859 | 1.25% | $10.74 | $870 | **$20** | $850 |
| 19 | $850 | 1.25% | $10.62 | $860 | **$20** | $840 |
| 20 | $840 | 1.25% | $10.50 | $851 | **$20** | $831 |
| 21 | $831 | 1.25% | $10.38 | $841 | **$20** | $821 |
| 22 | $821 | 1.25% | $10.26 | $831 | **$20** | $811 |
| 23 | $811 | 1.25% | $10.14 | $822 | **$20** | $802 |
| 24 | $802 | 1.25% | $10.02 | $812 | **$20** | $792 |
| 25 | $792 | 1.25% | $9.89 | $801 | **$20** | $781 |
| 26 | $781 | 1.25% | $9.77 | $791 | **$20** | $771 |
| 27 | $771 | 1.25% | $9.64 | $781 | **$20** | $761 |
| 28 | $761 | 1.25% | $9.51 | $770 | **$20** | $750 |
| 29 | $750 | 1.25% | $9.38 | $760 | **$20** | $740 |
| 30 | $740 | 1.25% | $9.25 | $749 | **$20** | $729 |
| 31 | $729 | 1.25% | $9.11 | $738 | **$20** | $718 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 32 | $718 | 1.25% | $8.98 | $727 | **$20** | $707 |
| 33 | $707 | 1.25% | $8.84 | $716 | **$20** | $696 |
| 34 | $696 | 1.25% | $8.70 | $705 | **$20** | $685 |
| 35 | $685 | 1.25% | $8.56 | $693 | **$20** | $673 |
| 36 | $673 | 1.25% | $8.42 | $682 | **$20** | $662 |
| 37 | $662 | 1.25% | $8.27 | $670 | **$20** | $650 |
| 38 | $650 | 1.25% | $8.12 | $658 | **$20** | $638 |
| 39 | $638 | 1.25% | $7.98 | $646 | **$20** | $626 |
| 40 | $626 | 1.25% | $7.83 | $634 | **$20** | $614 |
| 41 | $614 | 1.25% | $7.67 | $622 | **$20** | $602 |
| 42 | $602 | 1.25% | $7.52 | $609 | **$20** | $589 |
| 43 | $589 | 1.25% | $7.36 | $596 | **$20** | $576 |
| 44 | $576 | 1.25% | $7.20 | $584 | **$20** | $564 |
| 45 | $564 | 1.25% | $7.04 | $571 | **$20** | $551 |
| 46 | $551 | 1.25% | $6.88 | $558 | **$20** | $538 |
| 47 | $538 | 1.25% | $6.72 | $544 | **$20** | $524 |
| 48 | $524 | 1.25% | $6.55 | $531 | **$20** | $511 |
| 49 | $511 | 1.25% | $6.38 | $517 | **$20** | $497 |
| 50 | $497 | 1.25% | $6.21 | $503 | **$20** | $483 |
| 51 | $483 | 1.25% | $6.04 | $489 | **$20** | $469 |
| 52 | $469 | 1.25% | $5.87 | $475 | **$20** | $455 |
| 53 | $455 | 1.25% | $5.69 | $461 | **$20** | $441 |
| 54 | $441 | 1.25% | $5.51 | $447 | **$20** | $427 |
| 55 | $427 | 1.25% | $5.33 | $432 | **$20** | $412 |
| 56 | $412 | 1.25% | $5.15 | $417 | **$20** | $397 |
| 57 | $397 | 1.25% | $4.96 | $402 | **$20** | $382 |
| 58 | $382 | 1.25% | $4.77 | $387 | **$20** | $367 |
| 59 | $367 | 1.25% | $4.58 | $371 | **$20** | $351 |
| 60 | $351 | 1.25% | $4.39 | $356 | **$20** | $336 |
| 63 | $304 | 1.25% | $3.80 | $308 | **$20** | $288 |
| 64 | $288 | 1.25% | $3.60 | $291 | **$20** | $271 |
| 65 | $271 | 1.25% | $3.39 | $275 | **$20** | $255 |
| 66 | $255 | 1.25% | $3.18 | $258 | **$20** | $238 |
| 67 | $238 | 1.25% | $2.97 | $241 | **$20** | $221 |
| 68 | $221 | 1.25% | $2.76 | $224 | **$20** | $204 |
| 69 | $204 | 1.25% | $2.54 | $206 | **$20** | $186 |
| 70 | $186 | 1.25% | $2.33 | $188 | **$20** | $168 |
| 71 | $168 | 1.25% | $2.11 | $171 | **$20** | $151 |
| 72 | $151 | 1.25% | $1.88 | $152 | **$20** | $132 |
| 73 | $132 | 1.25% | $1.66 | $134 | **$20** | $114 |
| 74 | $114 | 1.25% | $1.43 | $116 | **$20** | $96 |
| 75 | $96 | 1.25% | $1.19 | $97 | **$20** | $77 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 76 | $77 | 1.25% | $0.96 | $78 | **$20** | $58 |
| 77 | $58 | 1.25% | $0.72 | $58 | **$20** | $38 |
| 78 | $38 | 1.25% | $0.48 | $39 | **$20** | $19 |



|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Month** | **Amount** | **Monthly**  **Interest** | **Interest Charged** | **Amount Owed** | **Monthly Payment** | **Total** |
| 1 | **$1,000** | **1.25%** | $12.50 | $1,013 | **$40** | $973 |
| 2 | $973 | 1.25% | $12.16 | $985 | **$40** | $945 |
| 3 | $945 | 1.25% | $11.81 | $956 | **$40** | $916 |
| 4 | $916 | 1.25% | $11.46 | $928 | **$40** | $888 |
| 5 | $888 | 1.25% | $11.10 | $899 | **$40** | $859 |
| 6 | $859 | 1.25% | $10.74 | $870 | **$40** | $830 |
| 7 | $830 | 1.25% | $10.37 | $840 | **$40** | $800 |
| 8 | $800 | 1.25% | $10.00 | $810 | **$40** | $770 |
| 9 | $770 | 1.25% | $9.63 | $780 | **$40** | $740 |
| 10 | $740 | 1.25% | $9.25 | $749 | **$40** | $709 |
| 11 | $709 | 1.25% | $8.86 | $718 | **$40** | $678 |
| 12 | $678 | 1.25% | $8.47 | $686 | **$40** | $646 |
| 13 | $646 | 1.25% | $8.08 | $654 | **$40** | $614 |
| 14 | $614 | 1.25% | $7.68 | $622 | **$40** | $582 |
| 15 | $582 | 1.25% | $7.28 | $589 | **$40** | $549 |
| 16 | $549 | 1.25% | $6.87 | $556 | **$40** | $516 |
| 17 | $516 | 1.25% | $6.45 | $523 | **$40** | $483 |
| 18 | $483 | 1.25% | $6.03 | $489 | **$40** | $449 |
| 19 | $449 | 1.25% | $5.61 | $454 | **$40** | $414 |
| 20 | $414 | 1.25% | $5.18 | $420 | **$40** | $380 |
| 21 | $380 | 1.25% | $4.74 | $384 | **$40** | $344 |
| 22 | $344 | 1.25% | $4.30 | $349 | **$40** | $309 |
| 23 | $309 | 1.25% | $3.86 | $312 | **$40** | $272 |
| 24 | $272 | 1.25% | $3.41 | $276 | **$40** | $236 |
| 25 | $236 | 1.25% | $2.95 | $239 | **$40** | $199 |
| 26 | $199 | 1.25% | $2.48 | $201 | **$40** | $161 |
| 27 | $161 | 1.25% | $2.02 | $163 | **$40** | $123 |
| 28 | $123 | 1.25% | $1.54 | $125 | **$40** | $85 |
| 29 | $85 | 1.25% | $1.06 | $86 | **$40** | $46 |
| 30 | $46 | 1.25% | $0.57 | $46 | **$40** | $6 |



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LESSON 8-24 STUDENT HANDOUT

INTERPRETING COMPOUND INTERESTS ON CREDIT CARD DEBT

The information found in the tables and graphs above represent two different payment plans on a credit card where the borrower charged $1000. Using the tables and graphs above, answer the following questions.

1. In the first scenario, what is the monthly payment the borrower pays each month? In the second scenario, what is the monthly payment the borrower pays each month?
2. How many months does it take the first borrower to pay off the loan? How long does it take the second borrower?
3. Who pays more total interest? Estimate the total interest paid by each borrower. Why does one person pay more interest than the other?
4. Credit cards are a convenient way of buying now and paying later. What can we generally say about credit card debt?

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LESSON 8-24 STUDENT HANDOUT

MANAGING AN 8TH GRADE BUDGET

Pretend you had a weekend job that paid you $120/month. In addition, you get an allowance of $10/week from your family. Imagine you receive an average of $180 each year in cash from birthdays, Christmas, etc. You also have $1,600 in your long-term savings and get 5% each year in interest on that money. Write your total amounts for each type of income and add them up.

Imagine your parents said they would pay for your basic ‘needs’ in life (rent, food at home, etc). However, you are responsible for all your ‘wants’. In the next year, you want to carefully manage your money, so you decide to create a budget. Here are the things you plan to do with your income in the next year.

**PLANNED EXPENDITURES**

Weekly spending money - $15

Annual subscription to Music magazine - $60

Monthly savings for gifts - $20

Annual savings for new jeans - $120

Annual savings for new cell phone - $240

Cost of cell phone use - $15/month

Long-term savings - 10% of total income

Assign each planned expenditure to one of the spaces below. Does your imaginary budget work – does your Total Net have any money left over? What if you wanted to increase your weekly spending money to $20 – how would you do it?

**ANNUAL INCOME**

Work Income \_\_\_\_\_\_\_\_\_\_

Allowance \_\_\_\_\_\_\_\_\_\_

Gifts \_\_\_\_\_\_\_\_\_\_

Interest \_\_\_\_\_\_\_\_\_\_

TOTAL INCOME \_\_\_\_\_\_\_\_\_\_

**ANNUAL EXPENDITURES**

Spending Money \_\_\_\_\_\_\_\_\_\_

Cell Phone \_\_\_\_\_\_\_\_\_\_

Gift Fund \_\_\_\_\_\_\_\_\_\_

Short-Term Savings \_\_\_\_\_\_\_\_\_\_

New to Long-Term Savings \_\_\_\_\_\_\_\_\_\_

Miscellaneous \_\_\_\_\_\_\_\_\_\_

TOTAL EXPENDITURES \_\_\_\_\_\_\_\_\_\_

**TOTAL NET (+/-)** \_\_\_\_\_\_\_\_\_\_

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LESSON 8-24 STUDENT HANDOUT

JOURNAL PAGE

**DATE:**

**Lesson 8-24 | *LEARNING TO USE MONEY IN 8TH GRADE***

***Q1:*** You see and hear about credit card offers everywhere. After having seen and learned about them in this lesson, how are you feeling about getting a credit card for yourself?

***Q2:*** On a scale of 1-10, how motivated are you for starting a savings account early and leaving it there for a while? Explain your answer with two reasons.

***Q3:*** After working on creating a budget, how motivated are you to establish a real budget for yourself? Explain your answer with two reasons.

***Answers:***