
Lesson by

Amanda Gibson, Federal Reserve Bank of Richmond

Lesson Description

In this lesson, students are actively engaged as savers or borrowers. Students discover that many savers have only a small amount of money to lend, while borrowers are looking for larger amounts. Financial intermediaries are introduced as a way to bring together small savings and the needs of borrowers. The characters used in the activity are taken from *Once Upon a Dime*, a comic book and video produced by the Federal Reserve Bank of New York. The comic can be ordered in sets of 35 on-line at www.newyorkfed.org/publications. The video is available on loan from the Federal Reserve Bank of St. Louis (www.stlouisfed.org/education/video_library.html). This lesson can be used with or independently of these free Fed materials.

Age Level

Middle School

Content Standards

NCEE National Standards in Economics

- √ Standard 10: Institutions
 - √ Benchmark 1, Grade 8: Banks and other financial institutions channel funds from savers to borrowers and investors.

Concepts

Banking

Objectives

Students will be able to:

- v Explain that banks and other financial institutions channel funds from savers to borrowers.

Time Required

1 hour

Materials

- v Handout 1: Once Upon a Dime Review Sheet. Make one copy for each student.
- v Handout 2: Saver Cards. Print on color paper and cut apart
- v Handout 3: Borrower Cards. Print on a second color paper and cut apart (Each student will need a copy of either a saver or borrower card. If you have more students than cards, make second copies of the saver cards.)
- v Handout 4: Currency. Make approximately 12 copies for a class of 25. Cut apart and attach the amount indicated on the card to each saver card. Cut extra currency for the bank.
- v Handout 5: Loan Application & Deposit Slip. Make one copy of the top portion for each borrower and one copy of the bottom portion for each saver. Make one transparency.
- v Visual 1: First River Bank. Make one copy
- v Visual 2: Second River Bank. Make one copy
- v *Once Upon a Dime* video (available from the St. Louis Fed)
- v *Once Upon a Dime* comic book. Order one copy for each student (available from the NY Fed).

Procedures

Recommended Warm-up Activity

1. Give each student a copy of Handout 1. Instruct them to answer the questions as they read Part II of the comic book, *Once Upon a Dime*, or view Part II of the video (11 minutes).
2. Then discuss the answers below:
 - v How did the island of Mazuma change in 10 years? (*Mazuma was discovered by people on an ocean liner sailing around the world. Many tourists visited the island and Mazuma's little harbor became crowded with ships bringing people wanting to live on the island.*)
 - v What problems were encountered using dimes and dullers as money and how were these problems solved? (*Dimes were problematic because big purchases required so many that shopping became very inconvenient. The solution was to make dullers, which are bigger stones that were worth more than dimes. The dullers*

were more convenient than dimes because fewer were needed—but they were a bit heavy to carry around. This difficulty was solved by issuing paper dullers, which were lighter and easier to carry.)

- v Why did the people of Mazuma first use banks? *(The people first used banks because they needed a place to put their wages and the profit from their businesses.)*
- v What difficulty arose from keeping dollars at the bank, and what was Bloomfield's solution to this problem? *(It was inconvenient to have to go to the bank to get money every time customers made a purchase. Bloomfield invented checks to solve this problem.)*
- v What were the advantages of writing checks on bank accounts as compared with withdrawing dollars? *(Checks were more convenient because customers could write a check to another person instead of going to the bank to get money for each purchase.)*
- v How could Nat pay for poles and cord when he did not have enough money in his bank account? *(Nat could borrow money from the bank. The bank lent Nat 1,000 dollars, which was added to his checking account. Of course, he had to pay interest for the use of the money. Nat could then write checks to the polemakers and cordmakers and get his supplies.)*
- v What are the main functions of banks on Mazuma? *(Banks are financial institutions that take in savings and make loans.)*

Activity

3. During the video or while the students review the comic book, distribute a saver or borrower card (with currency attached to saver card) to each student and instruct them to read their cards. If you have fewer students than the total amount of cards, hand out all saver cards first.
4. Explain that the students will be playing the role of characters on the fictional island of Mazuma. Those who have cards marked borrower will try to find a person or people willing to lend them money. They should borrow the amount their card indicates at the interest rate marked on their card (3, 4, 5 percent) or less. **Borrowers may only borrow from one person and may not pool savings.** Ask the students:
 - v What is interest? *(An interest rate is a price of money that is borrowed or saved.)*
 - v Why do you have to pay interest when you borrow money? *(You pay interest to compensate someone for the use of their money.)*
 - v If your card says you can afford an interest rate of four percent, can you borrow at five percent? *(No)* If your card says you can afford an interest rate of four percent,

can you borrow at three percent? Why? (*Yes, because three percent is less expensive than four percent. It is paying a lower price for the same thing.*)

- v Why are you borrowing money? (*Invite several students to respond: new clothes, to go to medical school, fishing supplies, etc.*)

5. Explain that the students who have saver cards would like to earn money on the money they have saved. Ask the students: How can you make income on money you have saved? (*You can make more money by loaning out your money for interest.*) They should try to lend their money at the interest rate marked on their card (2, 3, 4, 5, 6 percent) or more. Savers and borrowers may negotiate to make a deal. Ask the students:

- v Why do people get paid for saving money? (*People get paid interest when they loan their money to a bank or person because they can not use the money themselves while it is on loan.*)
- v If your card says “You would like to lend the money and earn at least four percent interest” why can’t you lend the money out for three percent? (*You will not earn as much interest.*)
- v How were you able to save your money? (*Invite several students to respond: selling coconuts, painting portraits, offering medical services.*)

Remind the students to only borrow money or lend money if the terms match the interest rate and amount on their cards.

6. Allow three minutes for borrowing and lending. After the time is up, discuss the following:

- v Some of you had saved money. What were you trying to do with the savings? (*Lend it out, earn interest and have the money with interest available to spend in the future.*)
- v Did you find someone who wanted to borrow money at the right interest rate or higher? (*Some did, some did not.*) Did you lend money to them? Why or why not? (*No, because they wanted to borrow more money than I had.*) Some students might have made matches.
- v Even if you found someone who wanted the exact amount of money you had at the right interest rate, why might you still not lend to them? (*You might not be sure they are going to pay you back. For example, a tourist might leave the island without paying off their loan.*)
- v What happens if you do not lend your savings? (*You do not earn interest.*)

- v Why did some of you want to borrow money? (*Wanted to make a large purchase for which they did not have enough money; wanted to start a business and needed money for building, equipment, and merchandise or supplies.*)
 - v Were you able to find someone who would lend you money at the right about of interest or less? (*Some did, some did not.*) Did you borrow money from them? (*No, because they did not have as much money as I needed.*)
 - v What will be the consequences if you are not able to borrow money? (*You will not be able to fix your house, start a business, go back to school, etc.*)
 - v What could make this borrowing/lending process easier? (*Someone who could collect all the small amounts of money, put them together, and lend them to people who wanted to borrow large amounts of money*) Guide students toward the idea of an intermediary, someone to “collect” savings and make loans like Bloomberg in Mazuma. Private financial institutions (banks, credit unions, savings & loans) are financial intermediaries. They pay people interest on their savings. Then they lend those savings out to other people and earn interest on the loan.
7. Select two students to act as bankers. Ask them to sit in desks at the front of the room. Give each banker a sign (Visuals 1 and 2) and the extra currency prepared.
8. Explain to the bankers that they can borrow any amount of money and lend any amount of money at the interest rates marked on their signs. If they borrow money from people they will have to pay the interest rate on savings. If they loan money, the borrower will pay them the interest rate on loans. They may not negotiate. Check for understanding:
- v If someone comes into First River Bank and wants to save money at five percent, can the banker take their money? (*No, because First River Bank only pays four percent on saving.*)
 - v If someone comes into Second River Bank and wants to borrow money at six percent, can the banker lend them money? (*Yes, because Second River Bank loans out money at six percent.*)
9. Explain that savers have another chance to lend their money and borrowers have another chance to borrow money. But this time, savers can either lend their money to another person or the bank. Borrowers can borrow money from the bank or another person. Ask the students:
- v What kinds of questions do you think the bankers might ask you if you come in to get a loan? (*They might ask if you are responsible, if you pay your bills on time, have you borrowed money before, did you pay it back on time, do you have any savings, do you have a job, etc.*)
 - v How do bankers know if borrowers are responsible, have a job, etc? (*Borrowers must complete a loan application. Bankers might also check a borrower’s credit*)

report: a report of all the loans you have had and if you have paid them off as promised.)

- v How do savers know that the River Bank is a safe place to keep their money? *(Banks are regulated by the government and other institutions like the Federal Reserve System to ensure that they are safe.)*
- v Would it be safer to loan money to a specific person or a bank? *(It is safer to loan your money to a bank. Banks are required to have detailed systems in place to ensure that your money is safe. A bank will have a more difficult time leaving the country without paying you back, a bank will not die, etc.)*

Advise bankers they will not have to actually ask these questions; potential borrowers will give them a completed loan application.

10. Distribute a copy of the top portion of Handout 5 to each borrower. Tell the students the borrowers will need to complete a loan application to get a loan from either bank. Reference the transparency as you explain.

- v Have the students fill in their name and the amount and purpose of the loan from their cards. Ask the students, why does the bank need to know your purpose for borrowing money? *(They want to ensure that borrowers are being responsible. Irresponsible borrowers might not pay the money back.)* What are some examples in real life of things for which people borrow money? *(House, college education, to start a business. Things that have value for years to come.)* Ask for examples from the borrowers cards that banks might question. *(New clothes, a trip to an island, new shoes.)*
- v Ask the students to answer the first question. Tell the students that banks will not loan you money if you do not pay it back.
- v Ask the students to answer question number two. Explain that an outstanding loan is any loan you already have, and paying back. Tell students that if you already have a loan, but you pay it back on time, it shows the bank you are responsible.
- v Have the students answer question three. Ask, what does your job have to do with getting a loan? *(You have to have income to make loan payments.)* Borrowers without an occupation listed on their card may make it up.
- v Ask the students to answer number four. Explain that paying back your loans on time is the best way to show the bank you are a responsible borrower and helps establish good credit. If the students do not have loans, they may circle N/A, which means the question is not applicable.
- v Have the students answer question five. Ask the students, why does the bank need to know that you have savings? Explain that having a savings account shows the bank that you are responsible with your money.

- ∨ Ask the students, what is bankruptcy? (*Bankruptcy is when you do not have money to pay your loans. If you have to declare bankruptcy it is going to be a long time before a bank will give you another loan.*)
 - ∨ Have the students answer number seven. Explain that the question might sound silly, but a loan application is a legal document and you can get in a lot of trouble if you do not tell the truth. Have the students sign and date the form.
11. Distribute a copy of the bottom portion of Handout 5 to each saver. Have the students complete the deposit slip based on the information on their cards.
- ∨ Ask the students to write today's date on the first line. Remind them that they want to save all their money, so they will not need to sign the second line.
 - ∨ Explain that the numbers at the bottom of the deposit slip, which comes in a check book, tell the bank which account belongs to you.
 - ∨ Ask the students, where would you fill in the amount of money you would like to deposit? (*On the first line, marked cash.*) Explain that the second and third lines are for check deposits. If you were depositing a check you would fill in the check number in the black space before the boxes.
 - ∨ Have the students calculate their subtotal in the appropriate line. Note that if you were depositing a check and wanted to get cash back, you would subtract that on the next line.
 - ∨ Have the students calculate their net, or total, deposit on the last line.
12. Remind the students that they will need to take their loan application or deposit slip with them to the bank. Also remind them that savers want to make the most interest possible and borrowers want to pay the least interest possible.
13. Allow three minutes for borrowing and lending. After the time is up, discuss the following:
- ∨ Were you able to borrow or lend money this time? (*More students should have been able to borrow or lend.*)
 - ∨ Why were you able to borrow or lend money when you were not last time? (*I did not have to find someone with the same amount of money I wanted or who wanted the same amount of money I had. I could just go to the bank.*)
 - ∨ If you were not able to borrow or lend money, why not? (*The banks did not offer an interest rate that would work for me.*) In real life, what might a saver or borrower do if this happened? (*Some savers who are unable to find a high enough interest rate, might reconsider a lower interest rate or find another way to invest their money. Borrowers might reconsider a higher interest rate or do without. For*

example, you might decide to take a less expensive vacation or do your house repairs yourself.)

- v Borrowers might have wondered earlier if you could pool the savings of several people to meet your goal. This is what private financial institutions (banks) do! They take in lots of small amounts of money in the form of savings and loan them out for big things like houses.
- v If the bank pays savers four percent, but lends out the money at five percent, what happens to the one percent difference? *(Banks use that money to pay their employees and pay their bills. What is left over is profit.)*
- v Looking at the interest rates for both banks, which bank seems to be making more profit? *(Second River Bank, because there is a larger difference between the interest rate they are collecting and the interest rate they are paying.)* Ask for a show of hands of how many savers deposited money in Second River Bank. You should get none. Ask, why did you all choose to save with First River Bank? *(They are paying a higher interest rate.)*
- v Ask the banker at Second River Bank if he or she came close to running out of money. Ask the students, how might the banker change the bank's interest rates if he or she wants to attract more savers to keep from running out of money? *(The banker will have to raise the interest rate the bank pays on savings.)*
- v Banks, just like most other businesses, have to compete for customers. If they do not get deposits, they will not have money to lend out to other people to make a profit. Remind them that as consumers, they should shop around before choosing a bank to save their money or get a loan.

Closure

14. Ask the students:

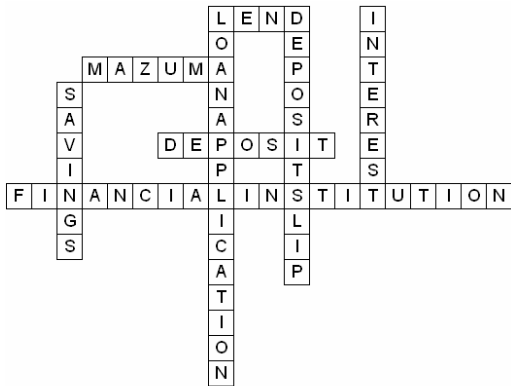
- v How can you make more money with the money you have saved? *(Lend it out to other people.)*
- v What do you call the money you make off your savings? *(Interest)*
- v If you need a large amount of money to start a business, buy a house, or get a college education, where might you get it? *(You could borrow it from a bank.)*
- v Why is it sometimes better to save with or borrow from a bank than another person? *(Banks take in lots of savings, so they have the money to make big loans. Banks are safe places to keep your money and honest lenders.)*
- v What do you have to pay if you borrow money? *(Interest)*

- What would be different about our economy if we did not have banks? (*Savers would have a hard time finding someone to borrow their money and pay interest. Borrowers would have to go without buying items like houses and cars because they would not be able to find people willing to lend them money.*)

Extension Activity

15. To reinforce vocabulary, have the students complete Handout 6: Crossword Puzzle.

Solution:



Visual 1: First River Bank

Welcome to First River Bank!

Now accepting deposits from savers
and making loans.

Interest rate on savings: **4%**

Interest rate for loans: **5%**

Visual 2: Second River Bank

Welcome to Second River Bank!

Now accepting deposits from savers
and making loans.

Interest rate on savings: **3%**

Interest rate for loans: **6%**

Handout 1: *Once Upon a Dime* Review Sheet **Name** _____

Answer the following question as you view the video *Once Upon a Dime* or read the comic book of the same name.

1. How did the island of Mazuma change in 10 years?

2. What problems were encountered using dimes and dullers as money and how were these problems solved?

3. Why did the people of Mazuma first use banks?

4. What difficulty arose from keeping dollars at the bank, and what was Bloomfield's solution to this problem?

5. What were the advantages of writing checks on bank accounts as compared with withdrawing dollars?

6. How could Nat pay for poles and cord when he did not have enough money in his bank account?

7. What are the main functions of banks on Mazuma?

Handout 2: Saver Cards

<p>Saver: Captain Sharky You have saved \$20 by selling your fish. You would like to lend the money and earn at least 4 percent interest.</p>	<p>Saver: Mr. Wingit You have saved \$30 by selling your coconuts. You would like to lend the money and earn at least 4 percent interest.</p>
<p>Saver: Blossom Fisbee You have saved \$50 by selling your flowers. You would like to lend the money and earn at least 3 percent interest.</p>	<p>Saver: Nat You have saved \$60 by repairing and selling torn nets. You want to lend the money and earn at least 3 percent interest.</p>
<p>Saver: Dr. Millicent Diligent You have saved \$70 by offering medical services. You would like to lend the money and earn at least 5 percent interest.</p>	<p>Saver: King Bomba You have saved \$100 by offering your wise advice. You would like to lend the money and earn at least 5 percent interest.</p>
<p>Saver: Mrs. Wingit You have saved \$40 by giving trapeze lessons to the island children. You would like to lend the money and earn at least 4 percent interest.</p>	<p>Saver: Pole Maker You have saved \$20 by selling poles to Nat the net maker. You would like to lend the money and earn at least 6 percent interest.</p>
<p>Saver: Spike You have saved \$50 by selling your spears. You would like to lend the money and earn at least 3 percent interest.</p>	<p>Saver: Teacher You have saved \$100 by teaching the school on Mazuma. You would like to lend the money and earn at least 2 percent interest.</p>

<p>Saver: Bloomfield You have saved \$200 by painting portraits. You would like to lend the money and earn at least 5 percent interest.</p>	<p>Saver: Boat Builder You have saved \$20 by building boats. You would like to lend the money and earn at least 4 percent interest.</p>
<p>Saver: Ship Captain You have saved \$40 by taking tourists to Mazuma. You would like to lend the money and earn at least 6 percent interest.</p>	<p>Saver: Cord Maker You have saved \$50 by selling cord to Nat the net maker. You would like to lend the money and earn at least 6 percent interest.</p>
<p>Saver: Check Printer You have saved \$10 by printing checks for Bloomfield. You would like to lend the money and earn at least 2 percent interest.</p>	<p>Saver: Gardener You have saved \$100 by tending Blossom Fisbee's flowers. You would like to lend the money and earn at least 2 percent interest.</p>

Handout 3: Borrower Cards

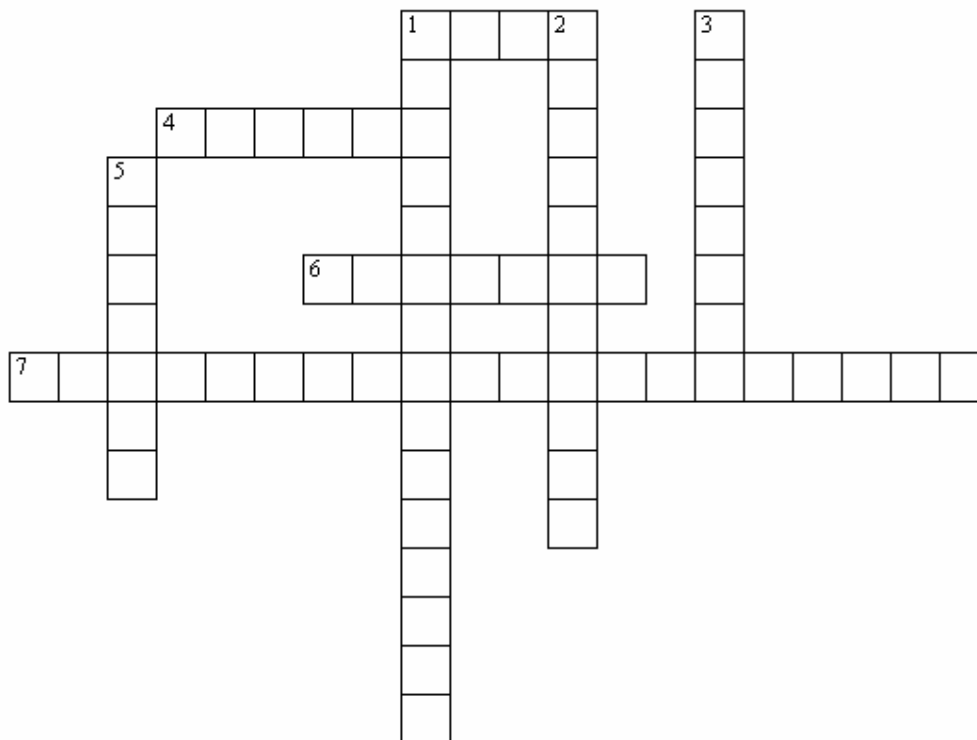
<p>Borrower: Entrepreneur You want to borrow \$500 to start your own fruit stand in Mazuma. You want to pay no more than 5 percent interest.</p>	<p>Borrower: Tourist Your luggage was lost at sea. You want to borrow \$100 for new clothes. You want to pay no more than 5 percent interest.</p>
<p>Borrower: Islander You have lived on Mazuma all your life. You want to borrow \$110 to take a trip to a nearby island. You want to pay no more than 4 percent interest.</p>	<p>Borrower: Dr. Diligent's Assistant You want to borrow \$1,000 to go to medical school. You want to pay no more than 4 percent interest.</p>
<p>Borrower: Vacationer You want to vacation in Mazuma. You want to borrow \$300 to rent an apartment on the beach. You want to pay no more than 6 percent interest.</p>	<p>Borrower: Islander You want to go on a long fishing trip with Captain Sharky. You want to borrow \$80 for supplies. You want to pay no more than 6 percent interest.</p>
<p>Borrower: Aspiring Musician You want to borrow \$100 to pay for a violin and lessons from Bloomfield. You want to pay no more than 5 percent interest.</p>	<p>Borrower: Gwendolyn Grendel You want to borrow \$300 to buy a closet full of new shoes. You want to pay no more than 5 percent interest.</p>
<p>Borrower: Islander Your house was damaged when a storm hit Mazuma. You want to borrow \$250 for repairs. You want to pay no more than 4 percent interest.</p>	<p>Borrower: Expert Chef You want to borrow \$700 to open a chain of restaurants in Mazuma. You want to pay no more than 6 percent interest.</p>

Handout 4: Currency

\$10	\$10
\$10	\$10
\$10	\$10
\$100	\$100
\$100	\$100

Handout 6: Crossword Puzzle

A Visit to the River Bank



ACROSS

- 1 To loan money to someone for interest.
- 4 A small comic book island that developed an economy with a banking system.
- 6 To put money in the bank.
- 7 A business that takes deposits and makes loans.

DOWN

- 1 You must complete this when applying for a loan.
- 2 This must be completed when ever you deposit money in a bank.
- 3 The price of money that is borrowed or saved.
- 5 Money that you did not spend. You can lend it out for interest.