A STORY OF INTEREST (AND SUPERVISION!)

Middle School Lesson Plan

State and National Teaching Standards

New York

Grade 6 Social Studies Standards and Practices

- E2. Examine the role that various types of resources (human capital, physical capital, and natural resources) have in providing goods and services.

Grade 7 Social Studies Standards and Practices

- E1. Explain how economic decisions affect the well-being of individuals, businesses, and society; evaluate alternative approaches or solutions to economic issues in terms of benefits and costs for different groups of people.
- E2. Identify examples of buyers and sellers in product, labor, and financial markets.

Grade 8 Social Studies Standards and Practices

- E1. Explain how economic decisions affect the well-being of individuals, businesses, and society; evaluate alternative approaches or solutions to economic issues in terms of benefits and costs for different groups of people

New Jersey

- 6.1.4.C.6. Describe the role and relationship among households, businesses, laborers, and governments within the economic system.
- 6.1.4.C.10. Explain the role of money, savings, debt, and investment in individuals' lives.
- 6.1.12.C.6.c. Analyze the impact of money, investment, credit, savings, debt, and financial institutions on the development of the nation and the lives of individuals.
- 6.1.12.C.9.c. Explain the interdependence of various parts of a market economy (i.e., private enterprise, government programs, and the Federal Reserve System).

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- 6.1.12.C.14.c. Analyze economic trends, income distribution, labor participation (i.e., employment, the composition of the work force), and government and consumer debt and their impact on society.

Connecticut

- ECO 6–7.1. Explain how economic decisions affect the well-being of individuals, businesses, and society.
- ECO 6–7.2. Evaluate alternative approaches or solutions to current economic issues in terms of benefits and costs for different groups and society as a whole.
- ECO 8.1. Explain how economic decisions affect the well-being of individuals, businesses, and society.

NCSS

Production, Distribution, and Consumption

- Knowledge: Learners will understand
  - That banks and other financial institutions channel funds from savers to borrowers and investors.

C3 Framework

- D2.Eco.10.6-8. Explain the influence of changes in interest rates on borrowing and investing.
- D2.Eco.2.6-8. Evaluate alternative approaches or solutions to current economic issues in terms of benefits and costs for different groups and society as a whole.
- D2.Eco.9.6-8. Describe the roles of institutions such as corporations, nonprofits, and labor unions in a market economy.
- D2.Eco.10.6-8. Explain the influence of changes in interest rates on borrowing and investing.
- D2.Civ.6.6-8. Describe the roles of political, civil, and economic organizations in shaping people's lives.

Grade Level

6-8

Time Required

45 – 60 minutes for each supporting question

Compelling Question

How are you like a bank?

Supporting Questions

Why is bank supervision important?

What makes personal finance personal?

What is the impact of a bank failure?

Objectives

- Define bank supervision and explain its goals
- Understand how the goals of supervision contribute to a healthy economy
- Define budget
- Differentiate between compound interest and simple interest
- Apply understanding of interest to a budget
- Identify main services that banks provide
- Cite reasons why banks fail and predict the impact of bank failures on an economy

Materials

- A Story of Interest (and Supervision!) comic book
- Reading 1: The Scoop on Credit Cards (Adapted from the Federal Reserve Bank of St. Louis's Cards, Cars and Currency)
- Reading 2: Why Do Banks Fail? (Adapted from the Federal Reserve Bank of Boston's Banking Basics)
- Handout 1: Bank Supervisors and Supervision Goals
- Handout 2: Bank Supervision and Your Economy
- Handout 3: Budgeting Budgets
- Handout 4: Interesting Interest
- Handout 5: Simple or Compound?
- Handout 6: Savvy Savings Plans
- Handout 7: Banks Refresher
- Handout 8: Can Banks Fail?
- Handout 9: Safe Banks and Safe Economies

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- Video: Fed Functions: Supervising and Regulating Financial Institutions, https://www.youtube.com/watch?v=3EtMibkWvXE
- Online: Investor.gov Savings Calculator, https://www.investor.gov/financial-tools-calculators/calculators/savings-goal-calculator

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Supporting Question 1: Why is bank supervision important?

Procedures

1. Begin the lesson by asking students what they think a principal of a school does. Write their answers on the board.

2. Based on their answers, ask why schools would need principals.

3. Explain to students that bank supervisors have a type of responsibility with banks similar to that of principals with schools.

4. Remind students that banks provide financial services such as loans, checking and savings accounts, certificates of deposit, and credit card services to individuals, businesses, and government.

5. Explain that because banks manage a lot of money, it is important that they are safe and sound. An important way to make sure that banks are keeping customers' money safe is through supervision, which is when members of the Federal Reserve System visit banks to review their plans and make sure that the banks can withstand any financial crises, especially when people start worrying about their money being safe or if bank loans will be paid back. Tell students that by examining the supporting questions in this lesson, they will also be thinking about the compelling question, **How are you like a bank?**

   Just like principals would observe teachers and classrooms to make sure that students are safe and that teachers are doing a good job, bank supervisors also make sure that banks are keeping everyone's money safe by monitoring, examining, and inspecting them to make sure banks are following certain rules and acting in a safe and sound manner.

6. Show "Fed Functions: Supervising and Regulating Financial Institutions" video clip from YouTube. Have students share what they observed in the video. Then ask students to read page 1 of A Story of Interest (And Supervision!). You may choose to read this together as a class, have a few student volunteers read aloud, or have students practice independent reading. Give enough time for all students to read page 1. Afterward, ask the following questions:
   a. What is Rallo's job title? *(Bank supervisor.)*
   b. What do you think a bank supervisor does? *(Helps keep banks safe and sound.)*

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State that bank supervisors help banks and other financial institutions to achieve these three goals:

1. Safety and soundness in the operation of financial institutions
2. Stability in the financial markets
3. Fair and equitable treatment of consumers in their financial transactions

7. Explain to students that they'll be split into groups to discuss one of these three goals and that each group will rewrite a goal in their own words. Afterward, they will teach this goal to other groups and explain why it is important. Pass out **Handout 1: Bank Supervisors and Supervision Goals** to students. Encourage students to use resources such as the internet, dictionaries, and the comic book to help them put these goals in their own words.

8. For Goal 1:

   Ask students to read page 16 of the comic book. Students will define *safety, soundness, operation,* and *financial institutions.* Instruct students to either write or draw their answers on Handout 1. Have them write why it is important for financial institutions to be safe and sound and how bank supervisors would help banks achieve this goal.

9. For Goal 2:

   Have students read pages 17-18 of the comic book. Students will define *stability* and *financial markets.* Instruct students to either write or draw their answers on Handout 1. You may need to explain that financial markets are where buyers and sellers meet to buy bonds, stocks, or other forms of money. Some examples would be the New York Stock Exchange, where stocks are bought and sold, or the real estate market. Have students write why it is important that financial markets have stability and how bank supervisors would help banks achieve this goal.

10. For Goal 3:

    Instruct the students to read page 18 of the comic book. Students will define *fair, equitable, consumers,* and *financial transactions*. Have them either write or draw their answers on Handout 1. Ask the students to write why it is important that consumers be treated fairly and equitably and how bank supervisors would help banks achieve this goal.

11. After groups finish rewriting their supervision goal, explain that each group will present and explain its goal to the class. Instruct students to fill out the rest of their handout when each group presents.

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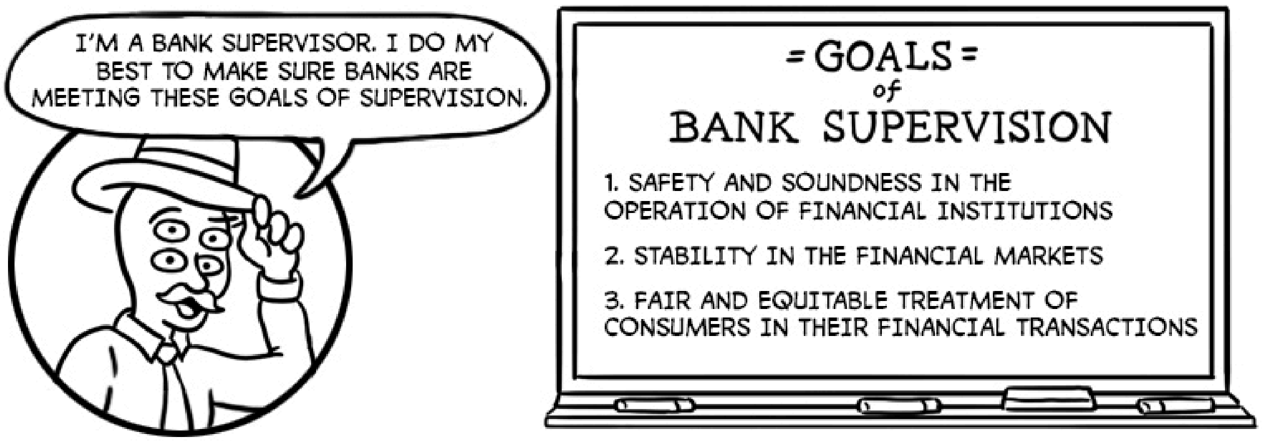
12. Pass out **Handout 2: Bank Supervision and Your Economy**. Instruct students to observe the "What is an Economy?" picture. State that this illustrates a healthy economy where there is careful and good use of money, resources, and production to produce goods and services for people to buy and businesses to sell. Have students think, pair, and share when completing the questions on Handout 2.
    a. What businesses and activities do you see? List at least 3 things that are happening in the illustration. *(Student answers will vary.)*
    b. How do the goals of supervision contribute to a healthy economy? Provide one example in the triangle below. *(Answers may include: when banks meet the goals of supervision and are safe and sound, they can make loans to help people and businesses; supervision goals help keep banks safe and sound so that people can trust banks to keep their money safe and make deposits; supervision goals help keep banks safe and sound so that new businesses can start by borrowing money from banks.)*

13. If time allows, ask students to draw their own "What is an Economy?" picture. Then, have them list and explain at least 3 actions that are made possible because of safe banks and financial institutions.

Bank Supervision and Supervision Goals



Rallo: *These goals are very important, but they can be a little difficult to understand. Can you help me explain them to your friends?*

Directions: With your group, look over your assigned supervision goal and rewrite it in your words. Add either an illustration or a graph. Then, explain why this goal is important for you, your community, and the economy, and how bank supervisors could reinforce this goal. Read pages 16-18 of A Story of Interest (And Supervision!) for some clues.

Goal: ____

Key words:

Definitions:

Illustrations/Graphs:

Why is this goal important?

How would bank supervisors help banks achieve this goal?

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Handout 1: continued

Goal: ____
Key words:
Definitions:
Illustrations/Graphs:

Why is this goal important?

How would bank supervisors help banks achieve this goal?

Goal: ____
Key words:
Definitions:
Illustrations/Graphs:

Why is this goal important?

How would bank supervisors help banks achieve this goal?

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A STORY OF INTEREST (AND SUPERVISION!) HANDOUT 2

Bank Supervision and Your Economy

Take a look at the **"What is an Economy?"** picture below.

What businesses and activities do you see? List at least 3 things that are happening.

1.
2.
3.

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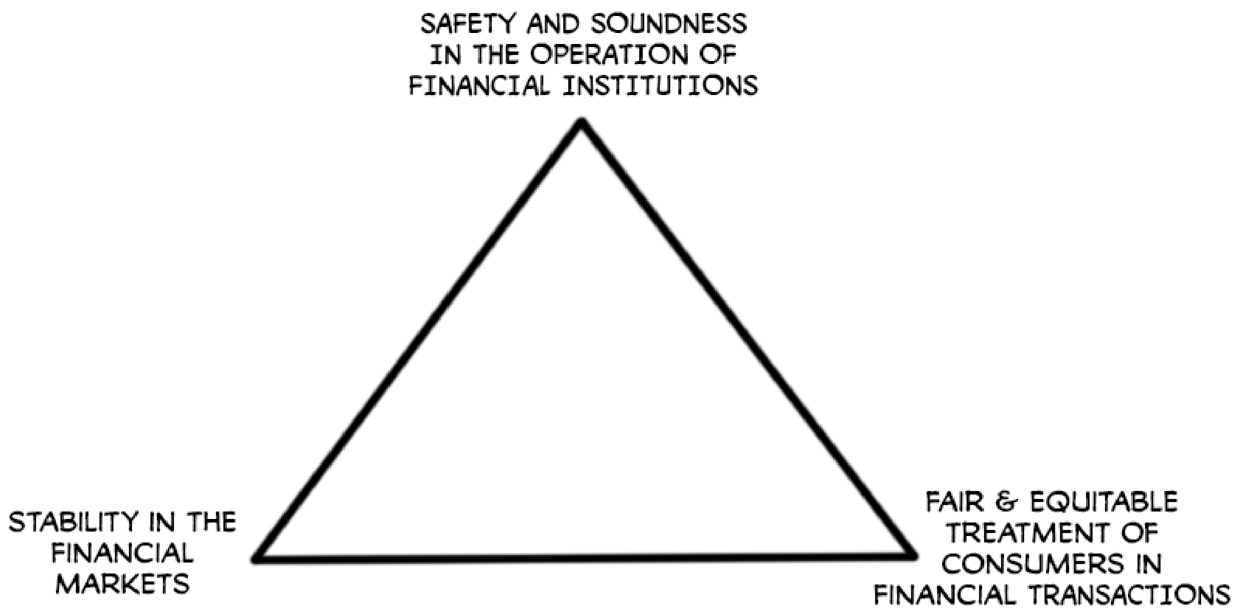
Handout 2: continued

How do the goals of supervision contribute to a healthy economy? Provide one example in the triangle below.



Supporting Question 2: What makes personal finance personal?

Procedures

14. Pass out **Handout 3: Budgeting Budgets** and ask students what they would do if they were given $100 in cash, to spend freely. Have students write their answers on Handout 3 and afterward ask students to share their responses.

15. Then, ask students if they had to live by themselves and only had $100 to spend to support themselves for an entire week, whether they would spend the money differently. Ask students to write their responses on Handout 3 and have them share their answers aloud.

16. Tell students that what they just did was **budgeting**. Explain that budgeting is when you estimate your income — in this case, their $100 — and the things they would have to spend their income on, i.e., expenses. Emphasize that a **budget** is a plan that outlines your money (income) and how you will save or spend it (expenses) over a period of time. Further explain that following a budget helps make sure you have money for your needs and wants, while enabling you to save money for short-term and long-term goals. Tell students that they will read some pages from the comic book to learn about budgeting.

17. *Optional:* Instruct students to visit https://www.jumpstart.org/what-we-do/support-financial-education/reality-check/ online and have them complete the questions to see what kind of "dream lifestyle" they want and how they would be able to achieve it. At the bottom of Handout 3, they can write down the weekly salary they would need and what steps they might need to take *(how they would manage their money or the types of jobs they could have)* in order to achieve their "dream lifestyle." Ask for student volunteers to share aloud.

18. Instruct students to read pages 9-10 of the comic book and answer the following questions on Handout 3.
    1. What did Flora tell Cybob that he should start doing with his money? *(Saving instead of spending so much.)*
    2. What are some examples of Cybob spending too much on his wants? *(Ice cream and golf shoes)*
    3. According to Flora, what is a budget? *(A plan for spending money; a statement of estimated income and expenses over a period of time.)*
    4. How can you start making your own budget to keep track of your expenses? *(Answers will vary.)*

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19. Explain that in this case, students had $100 in cash to spend for a week. Explain that there are other ways to pay for things, such as checks, debit cards, and credit cards. Ask students if they've ever seen their friends or family use credit cards. Ask what they think these cards are and write their answers on the board. Tell students that they'll learn more about credit cards by reading pages 5-6 of the comic book.

20. Ask students to answer the questions on **Handout 4: Interesting Interest** as they read the pages.
    1. What kept happening to Cybob's credit cards when he tried to use them to pay for his meal? (*They were declined. He is using them a lot to buy things.)*
    2. Based on Rallo's explanation, what is an **interest rate**? *(An interest rate is the amount that a credit card company will charge on top of the amount that was already borrowed, or spent.)*
    3. Based on Rallo and Cybob's conversations, do credit card companies lend their money, or credit, for free? ***(No.)***

21. Ask students to write their own sentence explaining what a credit card is, based on the comic book reading. Go over the following information[1] on credit and credit cards and have students read **Reading 1: The Scoop on Credit Cards.** After explaining the definitions and information, have students create a mindmap on credit (they can create their own or use the back of Handout 4.)
    a. **Credit** means consumers are able to obtain goods and services before payment, based on an agreement that they will pay later.
    b. **Credit** often takes the form of credit cards.
    c. **Credit cards** represent an agreement between the lender and the cardholder. The lender is a bank or financial institution that issues the credit card. Credit cards have a maximum amount that the cardholder can use.
    d. At the end of the month, the credit card company sends a monthly statement, or a list, of all purchases made with the card.
    e. If credit card customers do not pay the full amount they owe each month, they have to pay interest on top of their purchases. **Interest** is the price of using someone else's money.
    f. For example, if you have $100 left on your credit card statement and your credit card has 25% interest, you would still have to pay the $100 PLUS $25 because of the 25% interest. Then, your total monthly credit card bill would be $125.

[1] Adapted from the Federal Reserve Bank of St. Louis, Cards, Cars, and Currency (pages 16-17)

22. Have students complete the equations on **Handout 4: Interesting Interest**
    1. Credit card statement: $50
       Credit card interest: 25%
       Total Bill Amount: $***50*** (credit card statement) * 1 + ***.25*** (percent amount in decimal form) = $62.50
    2. Credit card statement: $200
       Credit card interest: 20%
       Total Bill Amount: $200 (credit card statement) * 1 + ***.20*** (percent amount in decimal form) = $240
    3. Credit card statement: $ ***100***
       Credit card interest: ***23%***
       Total Bill Amount: $100 * 1.23 = $123

23. Pass out **Handout 5: Simple or Compound?** Ask students to first read page 7 of the comic book and then ask what compound interest is. Explain the following terms to the students. Then, go over the questions in Handout 5 with the students.
    1. How does Flora define **compound interest**? (*Compound interest is "interest on interest," which is interest an investor earns on their original investment plus all the interest earned on the interest that has accumulated over time.)*
    2. Write the following definition of compound interest on the board: *Compound interest is interest, which is the price paid for borrowing money, that you earn on your original investment, plus all the interest that you already were earning over time.*
    3. What is investment? (*Investment is when you put money away in a bank to get future interest on it.)*
    4. What is simple interest? *(Simple interest is when you only earn interest on the initial or original amount you invest, i.e., the principal.)*
    5. What is the difference between simple interest and compound interest? (*Simple interest is when you only earn interest on the initial or original amount you invest, i.e., the principal, whereas compound interest is interest earned on the original investment plus the interest on interest.)*

24. Now, split the class into two groups. One group will be the simple interest group and the other group will be the compound interest group.

25. Explain that the simple interest group will only do the back side of the worksheet, the Simple Interest side, and that the compound interest group will do the front side of the worksheet, the Compound Interest side.

26. Ask students to look over Handout 5. Confirm with the class the principal amount they originally have ($1,000), the interest rate (10%), and the time (15 years). Go over the first problem from each side of the worksheet with the entire class.

27. Ask the simple interest group how much Cybob has in his account at Year 15. Students should find $2,400 in Year 15.

28. Then, ask the compound interest group how much Rallo has in his account at Year 15. Students should find $3,797.50 in Year 15.

29. Replicate the charts on the board for students to see. Ask students to compare the two bar graphs. Ask who earned more money in interest. Students should say that Rallo did.

30. For reinforcement, ask students to fill in the definitions of simple interest and compound interest on their handout. Ask students if they were to open a savings account at a bank, whether they would prefer simple or compound interest, and why.

31. Tell students that they can apply the concepts of compound and simple interest when they budget. Tell students that they will budget to save for college, with a savings goal of $20,000. Pass out **Handout 6: Savvy Savings Plans** to students and explain that they will go online to use the savings calculator from investor.gov[2]. The answer key for questions 1 – 4 is below.

    1. You start with $100 and have a savings goal of $20,000 for college. You save for 10 years and your bank offers you 5% interest. How much do you have to plan to add to your account every month to have $20,000? *$131.43 per month*

Savings Goal: College	***Initial Investment***	***Years to Grow***	***Interest Rate[3]***	***Compound Frequency***
$20,000.00	*$100.00*	*10*	*5%*	*Annually*

[2] Available at https://www.investor.gov/financial-tools-calculators/calculators/savings-goal-calculator
[3] For each chart, enter the interest rate into the calculator as a whole number to receive the correct answer. For example, 5% should be entered as "5." Do not enter the interest rate as a decimal.

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2. If your initial investment changed from $100 to $1,000, and you still save for 10 years with a 5% interest rate, how much do you have to plan to add to your account every month to reach $20,000? *$121.72*

Savings Goal: College	***Initial Investment***	***Years to Grow***	***Interest Rate***	***Compound Frequency***
$20,000.00	*$1,000.00*	*10*	*5%*	*Annually*

3. If your initial investment amount is $1,000, and you save for 10 years, but you find a bank that offers a 10% interest rate, how much do you have to plan to add to your account every month to reach $20,000? *$91.01per month*

Savings Goal: College	***Initial Investment***	***Years to Grow***	***Interest Rate***	***Compound Frequency***
$20,000.00	*$1,000.00*	*10*	*10%*	*Annually*

4. Would you rather put more money in your initial investment, save longer, or find a bank that offers higher interest rates to reach your savings goal? *(Answers will vary.)*

32. Once students have filled in their budget to save plan charts for college, tell students to choose an item that they'd like to save for, and then fill in the chart in Handout 6, Question 5, using the savings calculator. Afterward, ask for volunteers to share their charts. Answer key:

    5. Now, pick a savings goal for something you would like to own. It could be a house, a car, a trip to South America, a new XBox, Wii, Play Station, Nintendo Switch, a new TV, etc. Research the price of the item you want and fill it in on your chart. Start with $100 as your initial investment and 5 years to grow, with an interest rate of 5%. How much would you have to plan to add every month to your account to reach your savings goal? Use the savings goal calculator from investor.gov. *(Answers will vary.)*

33. Ask students to complete Question 6 on Handout 6. Remind students that they are answering the supporting question **"What makes personal finance personal?"** By adjusting these numbers, explain that students are developing their own savings plan to reach their goal. Each student will have unique goals to reach and different ideas about how long it should take, how much they should invest to start, etc. As a result, they will each need to make their own budget and plan to save the monthly amount required to reach their savings goal.

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6. Now, keeping your savings goal the same, change some of the numbers in your chart, such as your initial investment, years to grow, and interest rate. Pick and choose different numbers, and select the combination that you feel most comfortable with to achieve your savings goal.

Savings Goal:	**Initial Investment**	**Years to Grow**	**Interest Rate**	**Compound Frequency**
$	$		%	Annually

Final Budget Plan:

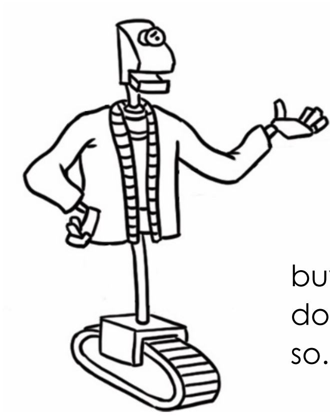
Savings Goal:	**Initial Investment**	**Years to Grow**	**Interest Rate**	**Compound Frequency**
$	$		%	Annually

How much do you have to plan to add to your account every month to achieve your goal?

$ ______________

Answers will vary.

Reading 1: The Scoop on Credit Cards



Cybob had so many credit cards and he kept using them to buy all his wants. But what are credit cards in the first place? What does credit even mean? And is interest really interesting? (We think so.) Read the next few paragraphs to find out!

Credit means consumers are able to get goods and services before payment, based on an agreement that they will pay later. **Credit** often takes the form of credit cards. You may have seen your family or friends use these. They can come in all different colors and most often are issued by a bank or financial institution.

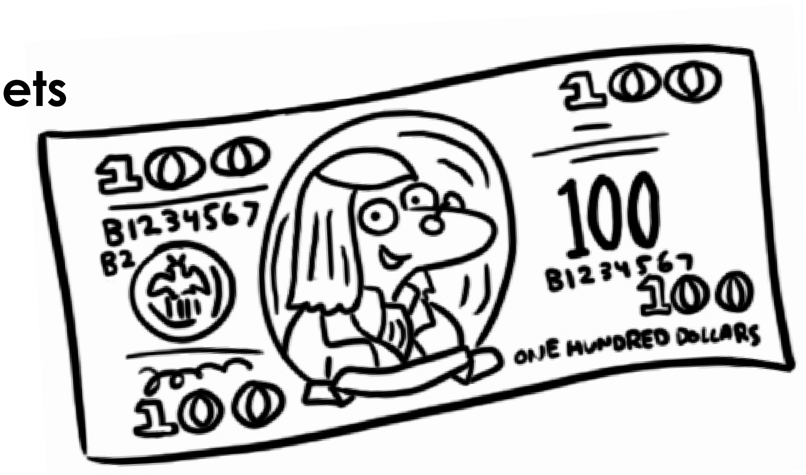
Credit cards represent an agreement between the lender (banks or financial institutions) and the cardholder (in this case, Cybob, or someone you might know who uses credit cards). Credit cards have a maximum amount that the cardholder can use to make purchases.

At the end of the month, the credit card company sends a **monthly statement**, or a list, of all of the purchases made with the card. If credit card customers do not pay the full amount of all purchases made each month, they have to pay **interest,** in addition to the amount of their purchases. **Interest** is the price of using someone else's money.

For example, if you have $100 left on your credit card statement and your credit card has 25% interest, you would still have to pay the $100 PLUS $25 because of the 25% interest. Then, your total monthly credit bill would be $125. Isn't interest truly interesting?

A STORY OF INTEREST (AND SUPERVISION!) HANDOUT 3

Budgeting Budgets



Wow! You've just been given $100 in cash! What will you do with it?

Now, you have $100 to spend to support yourself for an entire week. Are you going to spend your $100 differently? How?

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Instructions: Read pages 9-10 of the comic book and answer the questions below:

1. What did Flora tell Cybob that he should start doing with his money?

2. What are some examples of Cybob spending too much on his wants?

3. According to Flora, what is a budget?

4. How can you start making your own budget to keep track of your expenses?

Optional: Jump$tart Online Reality Check

Based on your online Reality Check results, about how much would you need to live your "dream lifestyle"?

________________/week

What steps can you take now to live your "dream lifestyle"?

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A STORY OF INTEREST (AND SUPERVISION!) HANDOUT 4

Interesting Interest

Directions: Read pages 5-6 of the comic book and answer the following questions.

1. What kept happening to Cybob's credit cards when he tried to use them to pay for his meal?

2. Based on Rallo's explanation, what is an **interest rate**?

3. Based on Rallo and Cybob's conversation, do credit card companies lend their money or credit for free?

Practicing My Interest!

Complete the following problems based on the credit card statement, interest, and total bill amount information given.

CREDIT CARD STATEMENT: $50
CREDIT CARD INTEREST: 25%

TOTAL BILL AMOUNT:
$________(CREDIT CARD STATEMENT) X
1+_____(PERCENT AMOUNT IN DECIMAL FORM)

$50 X 1.25 =$____________

CREDIT CARD STATEMENT: $200
CREDIT CARD INTEREST: 20%

TOTAL BILL AMOUNT:
$ ________(CREDIT CARD STATEMENT) X
1+_____(PERCENT AMOUNT IN DECIMAL FORM)

→ $200 X 1.2 =$____________

CREDIT CARD STATEMENT: $
CREDIT CARD INTEREST: %

TOTAL BILL AMOUNT:
$100 (CREDIT CARD STATEMENT) X 1
+ .23% (PERCENT AMOUNT IN DECIMAL FORM)

→ $100 X 1.2 =$____________

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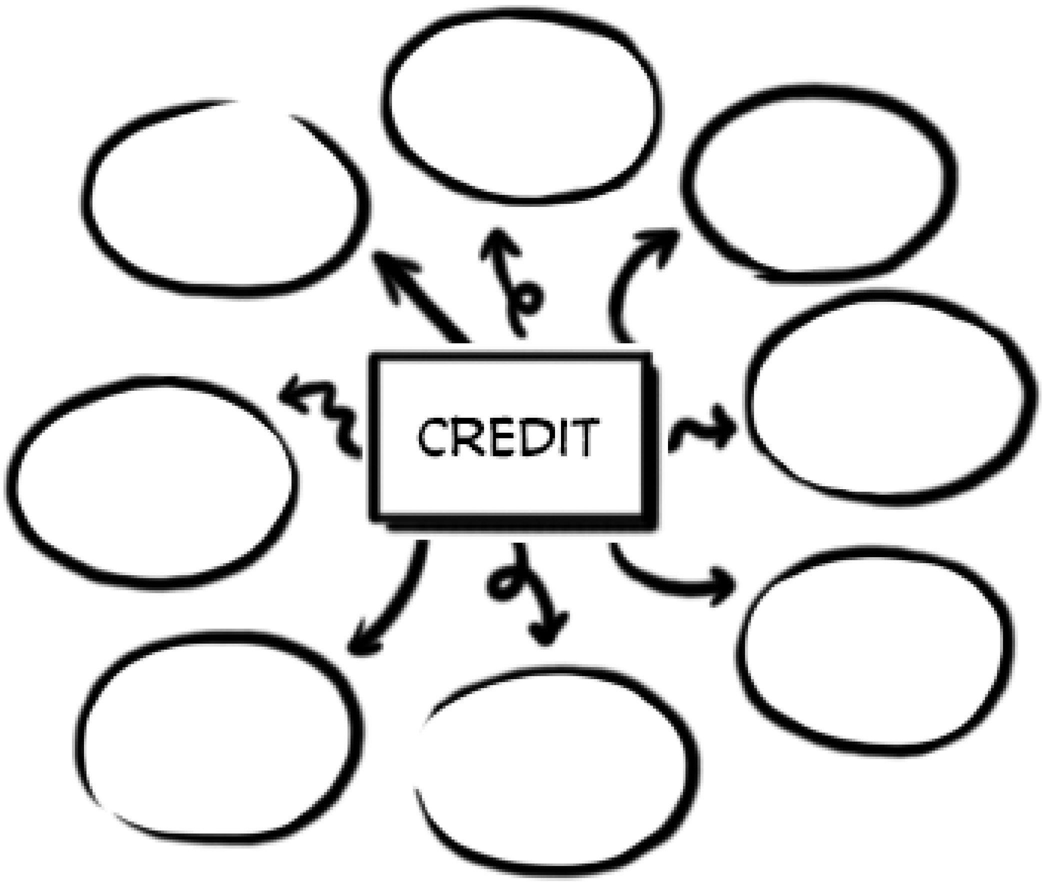
Handout 4: continued

Create a mindmap on credit based on the information and definitions discussed in class. Feel free to create your own mindmap or use the template below:



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HANDOUT 5

Simple or Compound?

Directions: Read page 7 of the comic book and answer the following questions.

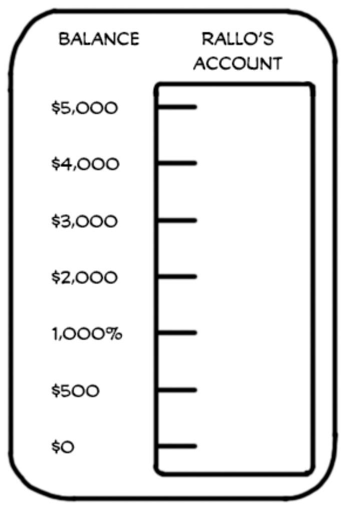
1. How does Flora define **compound interest**?
2. What is **investment**?
3. What is **simple interest**?
4. What is the difference between **simple interest** and **compound interest**?

Rallo has a savings account at his bank that pays 10% compound interest annually. Cybob has a savings account at his bank that pays 10% simple interest annually. Both Rallo and Cybob put in $1,000 as their principal amount. Compare the amounts that Rallo and Cybob will have after 15 years.

Compound Interest

Instructions: Look over Rallo's compound interest chart. Then, color in the bar graph up to the amount that Rallo has in his balance at 15 years.

YEARS	COMPOUND BALANCE	COMPOUND INTEREST EARNED	RATE
1	$1,000.00	$100.00	10%
2	$1,100.00	$110.00	10%
3	$1,210.00	$121.00	10%
4	$1,331.00	$133.10	10%
5	$1,464.10	$146.41	10%
6	$1,610.51	$161.05	10%
7	$1,771.56	$177.16	10%
8	$1,948.72	$194.87	10%
9	$2,143.59	$214.36	10%
10	$2,357.95	$235.79	10%
11	$2,593.74	$259.37	10%
12	$2,853.12	$285.31	10%
13	$3,138.43	$313.84	10%
14	$3,452.27	$345.23	10%
15	$3,797.50	$379.75	10%



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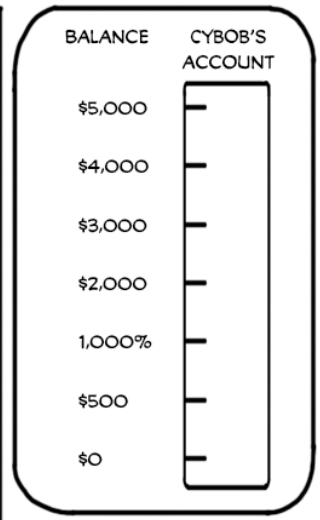
Handout 5: continued

Simple Interest

Instructions: Look over Cybob's simple interest chart. Then, color in the bar graph up to the amount that Cybob has in his balance at 15 years.

YEARS	SIMPLE BALANCE	SIMPLE INTEREST EARNED	RATE
1	$1,000.00	$100.00	10%
2	$1,100.00	$100.00	10%
3	$1,200.00	$100.00	10%
4	$1,300.00	$100.00	10%
5	$1,400.00	$100.00	10%
6	$1,500.00	$100.00	10%
7	$1,600.00	$100.00	10%
8	$1,700.00	$100.00	10%
9	$1,800.00	$100.00	10%
10	$1,900.00	$100.00	10%
11	$2,000.00	$100.00	10%
12	$2,100.00	$100.00	10%
13	$2,200.00	$100.00	10%
14	$2,300.00	$100.00	10%
15	$2,400.00	$100.00	10%



Remember!

- **Simple interest** is the amount of money earned on your __________________.
- **Compound interest** is "interest on ______________." It is interest one earns on their original investment PLUS all the ________ earned on the interest that's been gained over time.

Compare Rallo's account to Cybob's account. Which would you rather have? Why?

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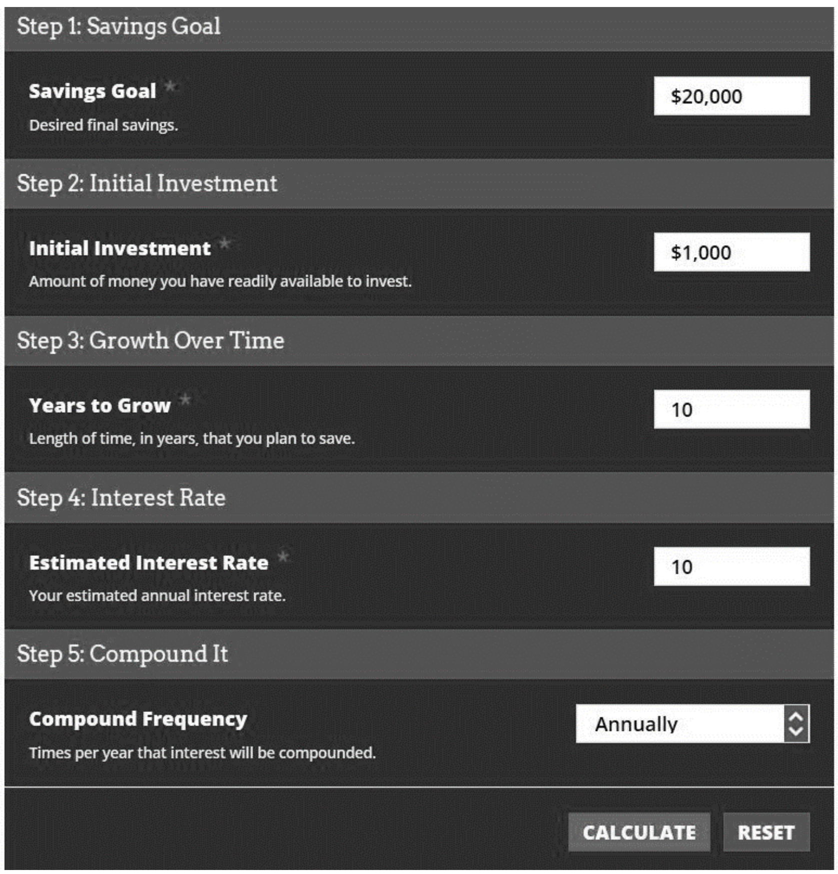
A STORY OF INTEREST (AND SUPERVISION!) HANDOUT 6

Savvy Savings Plans

Now that you've learned about compound and simple interest, you'll apply this concept to budgeting and saving. In this case, you'll start looking into your savvy savings plan for college! College may seem like a long time away, but as Rallo and Flora would say, it is always good to budget to save for the future!

Directions: Using the savings goal calculator from investor.gov(available at https://www.investor.gov/financial-tools-calculators/calculators/savings-goal-calculator), fill in the missing data to answer the following questions:



Step 1: Savings Goal

Savings Goal *

Desired final savings.

$20,000

Step 2: Initial Investment

Initial Investment *

Amount of money you have readily available to invest.

$1,000

Step 3: Growth Over Time

Years to Grow *

Length of time, in years, that you plan to save.

10

Step 4: Interest Rate

Estimated Interest Rate *

Your estimated annual interest rate.

10

Step 5: Compound It

Compound Frequency

Times per year that interest will be compounded.

Annually

CALCULATE RESET

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Handout 6: continued

1. You start with $100 and have a savings goal of $20,000 for college. You save for 10 years and your bank offers you 5% interest. How much do you have to plan to add to your account every month to have $20,000? $ ______________

Savings Goal: College	**Initial Investment**	**Years to Grow**	**Interest Rate**	**Compound Frequency**
$20,000.00	$100.00	10	5%	Annually

2. If your initial investment changed from $100 to $1,000, and you still save for 10 years with a 5% interest rate, how much do you have to plan to add to your account every month to reach $20,000? $ ______________

Savings Goal: College	**Initial Investment**	**Years to Grow**	**Interest Rate**	**Compound Frequency**
$20,000.00	$1,000.00	10	5%	Annually

3. If your initial investment amount is $1,000, and you save for 10 years, but you find a bank that offers a 10% interest rate, how much do you have to plan to add to your account every month to reach $20,000? $ ______________

Savings Goal: College	**Initial Investment**	**Years to Grow**	**Interest Rate**	**Compound Frequency**
$20,000.00	$1,000.00	10	10%	Annually

4. Would you rather put more money in your initial investment, save longer, or find a bank that offers higher interest rates to reach your savings goal?

5. Now, pick a savings goal for something you would like to own. It could be a house, a car, a trip to South America, a new XBox, Wii, PlayStation, Nintendo Switch, a new TV, etc. Research the price of the item you want and fill it in as your savings goal on this chart. Start with $100 as your initial investment and 5 years to grow, with an interest rate of 5%. How much would you have to plan to add to your account every month to reach your savings goal? $ ______________

Savings Goal:	**Initial Investment**	**Years to Grow**	**Interest Rate**	**Compound Frequency**
$	$100.00	5	5%	Annually

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Handout 6: continued

6. Now, keeping your savings goal the same, change some of the numbers in your chart, such as your initial investment, years to grow, and interest rate. Pick and choose different numbers, and select the combination that you feel most comfortable with to achieve your savings goal.

Savings Goal:	**Initial Investment**	**Years to Grow**	**Interest Rate**	**Compound Frequency**
$	$		%	Annually

Final Budget Plan:

Savings Goal:	**Initial Investment**	**Years to Grow**	**Interest Rate**	**Compound Frequency**
$	$		%	Annually

How much do you have to plan to add to your account every month to achieve your goal?

$ ______________

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Supporting Question 3: What is the impact of a bank failure?

Procedures

34. Ask students to name banks that they've either seen in their communities or banks at which they or their families or friends have accounts. (*Answers will vary.*) Ask students to recall what a bank does. (***Banks** provide financial services such as loans, checking and savings accounts, certificates of deposit, and credit card services to individuals, businesses, and government.)*

35. Split students into groups of 4 - 5 and distribute **Handout 7: Banks Refresher** to each student. Ask each group to list 2 - 3 reasons why they would go to a bank and have a bank account. Have each group write its answers on the handout. Students may also create a Google Doc to share their answers. (*Answers will vary, but should include*: *to deposit their money; to keep their money safe; to have a savings account; to grow money; to borrow money.)*

36. After each group has listed its reasons, go over the list together as a class.

37. Based on the list, ask students to deduce two main services that banks provide. If students need help, refer them to page 16 of the comic book. (Students should answer: *accepting deposits and making loans.)* Have students write these two main services that banks provide on Handout 7.

38. Ask students to recall what bank supervision is and the three main goals of bank supervision. For review, or for a quick mini-lesson on bank supervision, please do the immediate following steps; otherwise skip to step 39.

    38a. Have students read page 1 of A Story of Interest (And Supervision!) comic book. You may choose to read this together as a class or have a few student volunteers read aloud, or have students practice independent reading. Give enough time for all students to read page 1, then afterward, ask the following questions:

    1. *What is Rallo's job title? Bank supervisor.*
    2. *What does a bank supervisor do? Helps keep banks safe and sound.*

    38b. State that bank supervisors help banks and other financial institutions to achieve these three goals:

    - Safety and soundness in the operation of financial institutions
    - Stability in the financial markets
    - Fair and equitable treatment of consumers in their financial transactions

    38c. Explain that school principals are similar to bank supervisors in that they have to monitor schools and make sure that schools are safe and sound. Have students create similar posters on bank supervision (this can be done

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either on Google Slides or on poster paper). An example to show students can be: "Being a bank supervisor is like being a school principal – just like a bank supervisor monitors and observes banks to keep them safe and sound, a principal monitors and observes classrooms and teachers to make sure students are safe and sound in their school."

39. Distribute **Handout 8: Can Banks Fail?** Ask the students, "Do you think banks can fail?" and wait for their responses. Ask students to recall the goals of supervision and to infer how and why banks could fail. Instruct students to share their thoughts and answer the questions on Handout 8.

40. Say to students, "Recall that one of the main services of banks is to make loans. What would happen if banks made too many loans and didn't keep enough cash?" Wait for students to share their thoughts aloud.

41. Ask students to read page 12 of the comic book. Ask why the bank was drifting down. (*Students should answer that the bank is drifting because it can't afford to pay its hover bill. It extended too much credit and didn't keep enough cash on hand. Also, the loans it made haven't been paid back yet.)*

42. *Optional additional reading*: For further reading on why banks fail, have students read (Reading 2) "Why Do Banks Fail?" from the Federal Reserve Bank of Boston's *Banking Basics* (https://www.bostonfed.org/publications/economic-education/banking-basics.aspx).

43. Distribute **Handout 9: Safe Banks and Safe Economies**. Ask students to look at the comic book picture on Handout 9. Instruct students to use the picture to list three activities that they see.

44. On the opposite side of Handout 9, ask students to think about how the picture would change if there were no bank supervisors, and banks were not meeting the goals of supervision. What could happen to the economy overall? *(some of the shops could go out of business; customers might not have extra money to buy the things they want – like ice cream or a boat, especially if they have less money for their needs.)* Ask students to draw how they think the picture would change.

45. They may either answer the questions on their handout, or create a Google Doc to answer. They may also create a presentation using either PowerPoint or Google Slides to illustrate or describe and share what would happen to the picture if banks failed.

46. As an assessment, instruct students to create their own quizzes on Google Survey on how banks could fail and the impact it would have on the economy. Instruct students to share their survey with someone in the class.

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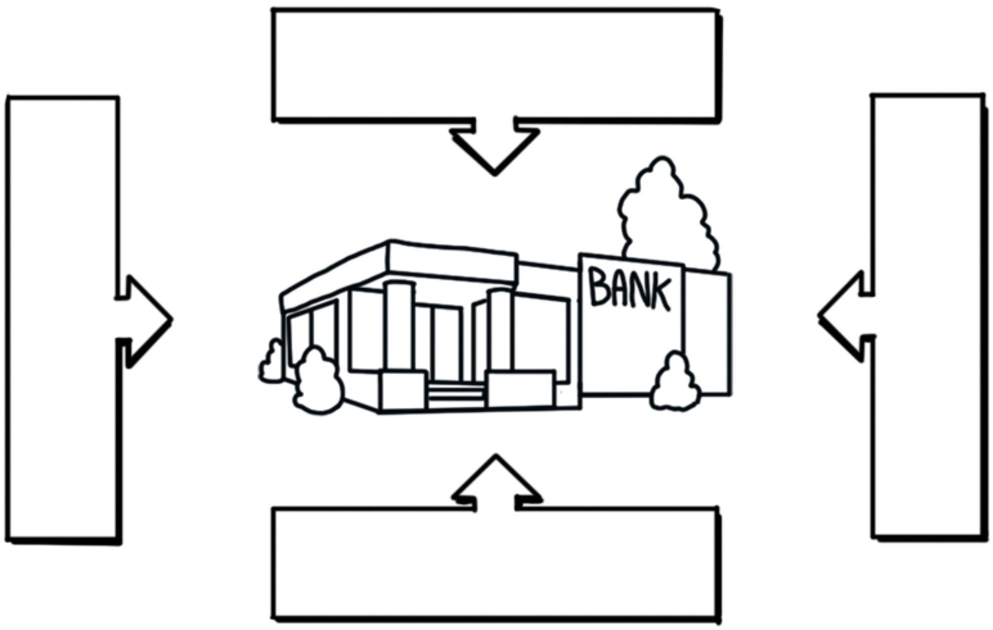
A STORY OF INTEREST (AND SUPERVISION!)

HANDOUT 7

Banks Refresher

Directions: Fill in some reasons why you or other people would go to a bank and have a bank account.



Based on the reasons you listed above, what do you think are two main services that banks provide?

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Reading 2: Why Do Banks Fail? (Excerpted from the Federal Reserve Bank of Boston's "Banking Basics")

WHY DO BANKS FAIL?

A bank is a business, and like other businesses, they can fail. Sometimes they fail because the people who run them make poor business decisions such as expanding too quickly or putting too much money into one type of loan.

Sometimes they fail because of fraud. Maybe the president makes questionable loans to friends or hires unqualified relatives and pays them huge salaries. But banks also go out of business because changing economic conditions make it difficult or impossible for borrowers to repay their loans. Here's an example.

Gusher National Bank Slips on Falling Oil Prices

Falling energy prices mean cheaper gasoline and lower home heating bills. So, falling oil prices must be good, right?

Not for everyone! Take the case of Gusher National Bank. Gusher was very aggressive in making loans to oil and natural gas companies that had no problem repaying their loans when energy prices were high. The loans spelled big profits for Gusher, and everyone agreed that Gusher's executives were smart business people who really knew how to make money.

Then the economy slowed down, and the demand for energy fell. Factories burned less oil and natural gas. Truck drivers, commuters, and vacationers drove fewer miles and burned less fuel. As a result, energy prices dropped sharply, and many energy companies fell behind on their loan payments. Some even stopped making payments altogether.

Months passed, oil prices remained low, and more energy companies fell behind on their payments. Finally, Gusher lost so much money to bad loans that government regulators had to step in and close the bank. Gusher had fallen victim to changing economic conditions— falling energy prices and a high concentration of loans to energy companies.

A BANK IS A BUSINESS, AND LIKE OTHER BUSINESSES, THEY CAN FAIL.

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A STORY OF INTEREST (AND SUPERVISION!) HANDOUT 8

Can Banks Fail?

Directions: Answer the following questions below:

1. What is a bank supervisor? (Hint: read page 13 of the comic book).

2. What are the goals of supervision? (Hint: read page 1 of the comic book).

3. What do you think would happen to banks if there were no bank supervisors, and if supervision goals were not met? Do you think banks can fail?

4. Read page 12 of the comic book. Why was the bank drifting down?

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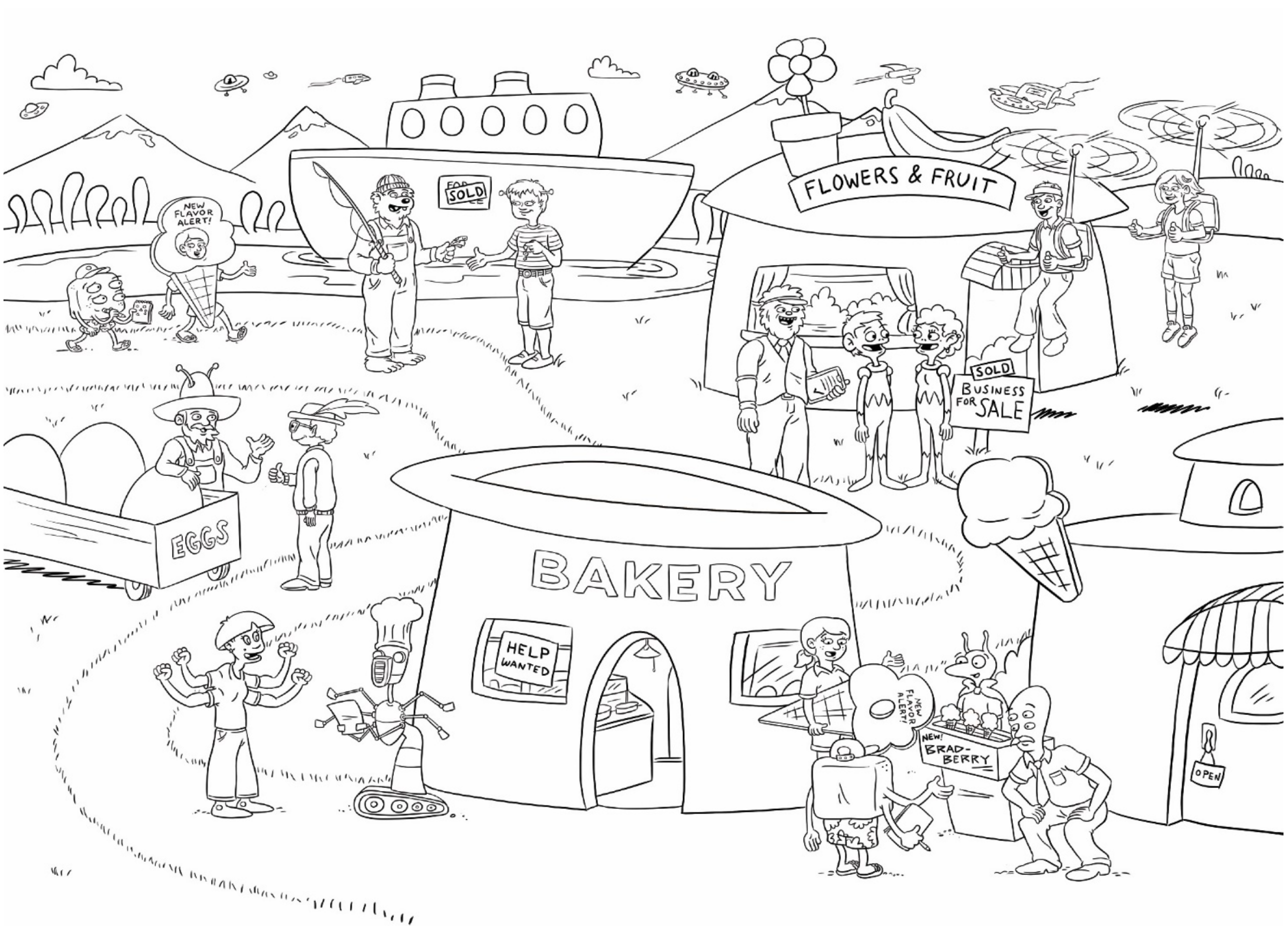
A STORY OF INTEREST (AND SUPERVISION!)

HANDOUT 9

Safe Banks and Safe Economies

Directions: Look at the picture below. List at least 3 activities you see happening.

1.
2.
3.



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Handout 9: continued

If there were no bank supervisors, and banks were not meeting the goals of supervision, what could happen to the activities you see? What could happen to the economy overall? Draw how the picture would change. (Hint: Think about why people and businesses need to take out loans from banks.)

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