

Rock, Brock, and the Savings Shock by Sheila Bair (Albert Whitman & Company, Morton Grove, Illinois 2006) ISBN 978-0-8075-7094-4

Literature Annotation

Gramps teaches his twin grandsons the value of saving money when he pays each a dollar a week to help him with summer chores, and then matches every dollar each boy saves.

Grade Level: Grade 6-8

Duration: 60 minutes

Economic Concepts: Consumption, Production, Money Management

Maryland State Curriculum

Personal Financial Literacy Standards

Standard 2: Students will relate choices regarding their education and career paths to earning potential.

2.8.C. Analyze the relationship among income, spending decisions and lifestyle.

Standard 3: Students will develop skills to plan and manage money effectively by identifying financial goals and developing spending plans.

3.8.A Demonstrate the ability to use money management skills and strategies.

Standard 5: Students will develop skills to plan and achieve long-term goals related to saving and investing in order to build financial security and wealth.

5.8.B.2 Explain how financial institutions protect consumer's money.

5.8.B.3 Apply the "Rule of 72" to a financial decision.

Standard 6: Students will develop financial planning skills to minimize financial setbacks.

6.8.A Examine strategies that protect income and wealth.

6.8.B.1 Describe the need for and value of different types of insurance.

6.8.B.4 Describe ways for protecting current and future personal assets against financial loss.

Objective: Students will be able to...

- evaluate two versions of a savings plan.
- describe how insurance works

Vocabulary

compounding, or compound interest: earning interest on interest.

Rule of 72: how long it takes money to double in value

interest: payment for the use of someone else's money

insurance: a risk management tool that protects an individual from specific financial losses under specific terms and premium payments, as described in a written policy document

Additional vocabulary: matching funds, compounding interest, Federal Deposit Insurance Corporation

Teacher Materials

- Read-Aloud copy of the book *Rock, Brock, and the Savings Shock*
- Transparency of Resource 1: *Gramps's Savings Plan, Version 1*
- Transparency of Resource 4: *How the FDIC Works*
- Optional: *Virtual Economics™* CD (Available from the Maryland Council on Economic Education)

Student Materials

- Resource 2a & b: *Brock's Savings Plan, Version 2* (One per student)
- Resource 3: *Doubling Your Money* (One per student)

Teacher Background

A working knowledge of compound interest is essential to teaching this lesson. In the back of the text, in the section "So You Want to Be a Millionaire," the author provides an explanation of how compounding works.

Motivation

Hold up a dollar bill. Ask students if they know of any way to make the dollar bill turn into 2 dollar bills. Tell them you will be reading a story in which this kind of money-doubling happens.

Development

1. Display the cover of the book *Rock, Brock, and the Savings Shock*. Ask students to predict what they think the book is about based on the cover. Mention that the author, Sheila Bair, spent all of her career working with jobs related to money and tries to help students learn to save enough money to become millionaires!
2. Conduct a Read-Aloud of the first 3 pages of the story. Discuss the twins' differences, including their handling of money. Ask students: *Which twin are you most like in your handling of money?* Explain that people who earn an income make decisions about how to spend or save the money based on their lifestyles.

3. Continue with the Read-Aloud for the next 3 pages. Discuss Gramps's saving plan that will match the twins' money at the end of each week.
4. Display a transparency of Resource 1: *Gramps's Savings Plan*. Tell students they will track the savings of each of the twins.
5. Continue the Read-Aloud to the end of the story, stopping every time Gramps matches the twins' money at the end of a week. Have the students help you record the savings for each twin on the transparency.
6. Discuss the story events using some of the following questions:
 - a) What was Gramps trying to teach the twins about saving money? (*Saving money is very important. Getting extra money for your savings can really make your money "grow."*)
 - b) Name some of the things the twins bought with their money that summer. Discuss the lasting value of the goods purchased. Categorize their spending choices into "good" and "bad" decisions and discuss why each item was placed in the selected category.
 - c) What was different about the way the two boys handled their income? (*Rock spent all of his money right away, sometimes on items with no lasting value. Brock delayed his spending and saved his money in order to get extra money (interest) added and to buy things that would hold their value longer.*)
7. Read aloud the following author's quote described in the section "So You Want to Be a Millionaire?" in the back matter of the book: *"Unfortunately, most of us don't have wealthy grandpas who will match our savings each week. But banks will keep your money safe and give you a little extra money every year. This money is called 'interest'."*
 - a) Use an example of the bank giving you an extra 20 cents of interest for every \$10 you save in their bank.
 - b) Middle school students have learned percentages in mathematics class and can make conversions among decimals, fractions, and percents. The author's example of compound interest -- as described in the section "So You Want to Be a Millionaire?" -- would offer an opportunity for students to use these skills as the extension of a mathematics lesson.
 - c) SAY: *Make a prediction about how long do you think it would take Brock's money to double if he continued to receive 5% interest? Do you suppose it would take more or less time for Brock's money to double if he was receiving 8% interest? (less time)* SAY: *There is a simple way to find out how long it will take to double your money. You can use this method for any interest rate. Have students read and complete Resource 3: *Doubling Your Money*, (The answers are 7.2 years and 18 years.)*

8. Have students brainstorm a list of all of the items that Rock bought during the time Gramps was giving the boys money. ASK: *Suppose Brock and Rock's home had been robbed or experienced a fire, what would have happened to all of the things Rock bought?* (They could have either been taken or destroyed.) ASK: *How could Rock replace all of the items?* Have students brainstorm their ideas. (A student might suggest insurance. If not, ask if the same thing happened to their house how could they replace missing or destroyed items.) Ask students to describe how they think insurance works.

9. Have students view the "Insurance" video from *Virtual Economics*® (To reach the video click "Concepts", then "Personal Finance" and "Insurance.") What are some of the types of insurance that can be purchased? (*Life – Car – Home – Health – Renters*) ASK: *How would insurance work to help Rock recover his stolen or destroyed belongings?* (He or his parents would have to present proof, such as pictures or receipts, that he owned the items. After filing a claim, the insurance agency would issue a check to pay his parents.)

10. ASK: *Where did Brock keep his money?* (At first in a piggy bank, later on he built a crate and at the end, he opened a bank account.)
 - DISCUSS: How safe is money that is deposited in a bank? Ask students if they have ever heard of FDIC
 - Display Resource 4 and use it to explain the workings of the FDIC to students. (*Banks pay insurance premiums to the FDIC for the insurance. In return, the FDIC insures bank accounts for up to \$250,000 -- the insurance amount designated through 2012 unless Congress acts to change it. As part of the program the FDIC inspects banks to help insure the banks will stay in business.*)

Assessment

Display a transparency of the completed chart from Resource 1: *Gramps' Savings Plan, Version 1*. Distribute Resource 2: *Brock's Savings Plan, Version 2*. Have students calculate Brock's savings for the weeks 6 through 10 and respond to the questions. (Completed chart may be found in the book section "Do the Math.")

Additional Activities

- Introduce the students to *Sheila's Six Savings Tricks* in the back of the book.
- Invite a local bank to send a representative to your class to talk about way children can save money with their bank.
- If your school has a business partner, ask them to match money saved by the students each week for 4 weeks. The saved money could go toward a special project, such as a local school project, hurricane relief, or environmental project.

Gramps' Savings Plan, Version 1

	Brock Saved	Gramps Matched	Brock's Total	Rock Saved	Gramps Matched	Rock's Total
Week 1			\$1 (Gramps paid \$1 for the work.)	(Rock earned \$1)	\$0	\$1
Week 2	\$1	\$1	\$2	\$0	\$0	\$0
Week 3	\$2	\$2	\$4	\$0	\$0	\$0
Week 4	\$4			\$0		
Week 5						
Week 6						
Week 7						
Week 8						
Week 9						
Week 10			<i>Total of all weeks so far</i>			<i>Total of all weeks so far</i>

NAME: _____

Resource 2a

Brock's Savings Plan, Version 2

In this version, Brock buys the rocket for \$7 at the end of week 4. Complete the chart to show Brock's savings.

	Brock Saved	Gramps Matched	Brock's Total
Week 1	(Brock earned \$1)	\$1	\$1
Week 2	\$1	\$1	\$2
Week 3	\$2	\$2	\$4
Week 4	\$4	\$4	\$8
Brock buys the rocket for \$7, leaving \$1 in savings.			
Week 5	\$1	\$1	\$2
Week 6	\$2		
Week 7	\$4		
Week 8	\$8		
Week 9			
Week 10			

Resource 2b

1. According to Version 2 of *Brock's Savings Plan*, how much money would Brock have at the end of the 10 weeks?

2. When he bought the rocket in week 5, Brock reduced his savings to \$1. How did that decision affect his total savings at the end of the summer? (Remember in the original savings plan, Brock had \$512 at the end of the 10 weeks.)

3. Which of the two Savings Plans would you recommend? Circle your choice:

Gramps's Savings Plan, Version 1 Brock's Savings Plan, Version 2

On the lines below, explain the reasons for your choice:

4. Explain what you have you learned about saving money from this lesson.

5. Explain the role insurance plays in terms of the goods you own.

Doubling Your Money

How long will it take for Brock's money to double if he receives 5% interest? When a person earns interest on the interest it is called **compound interest**. The Rule of 72 makes it possible to find out how long it will take for money to double if the savings account is earning compound interest.

Let's take another look at the examples from "So You Want to Be a Millionaire." If money is deposited in a bank account and earns 5% interest, after one year the account will have earned \$100 in interest.

$$5\% \times \$2,000 = \$100$$

Since the account earns compound interest it means that in year 2 interest will be earned on \$2,100.

$$5\% \times \$2,100 = \$105$$

$$\$2,100 + \$105 = \$2,205$$

You can see that after the second year there is \$2,205 in the account. You could continue to multiply and add each year's interest until you find that the money doubles. There is another way.

The Rule of 72 tells how many years it will take for savings to double at a given rate of interest, as long as the money isn't withdrawn from the account. Simply divide 72 by the interest rate.

$$72 / 5 = 14.4$$

This means that the money will double in 14.4 years.

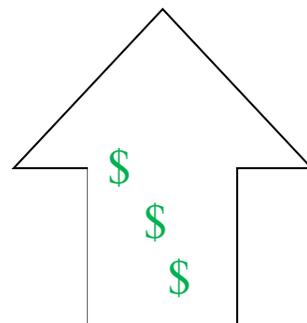
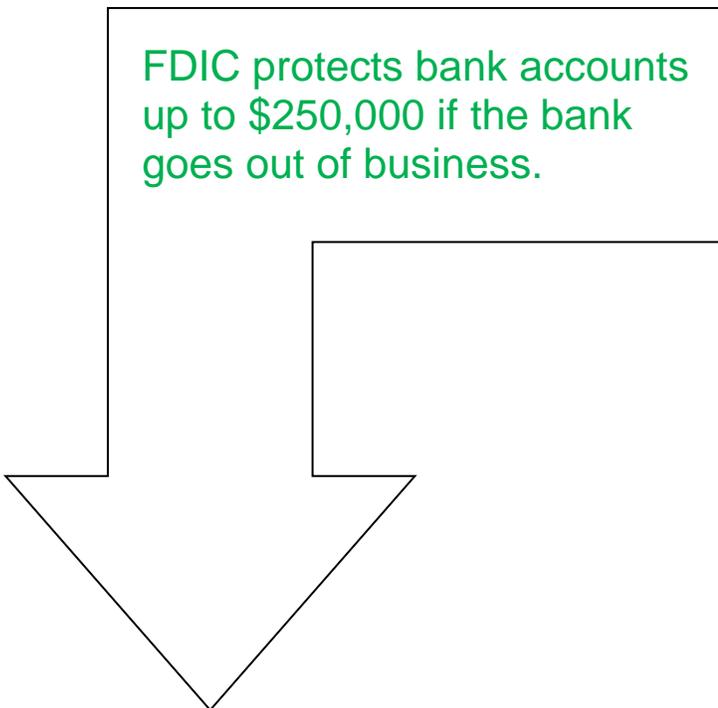
Do the Math! (Now it is your turn.)

1. How long will it take for the money to double if the interest rate is 10%?

2. How long will it take for the money to double if the interest rate is 4%?

How the FDIC Works

FDIC protects bank accounts up to \$250,000 if the bank goes out of business.



Banks pay a premium to the FDIC

