

# Beatrice's Goat

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## Lesson by

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## Lesson Description

In this lesson, students listen to a story about Beatrice, a little girl from Uganda, who receives a goat and the impact of that goat on her family. They learn what it means to save and use estimation to decide whether or not people have enough money to reach a savings goal. They also work through a set of problems requiring that they identify how much additional money people must save to reach their goals. Students learn what opportunity cost is and identify the opportunity costs of savings decisions made by Beatrice and her family.

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## Age Level

Grades 3-5

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## Content Standards

### National Standards in Economics

- Standard 1: Productive resources are limited. Therefore people cannot have all the goods and services they want; as a result, they must choose some things and give up others.
  - Benchmark 1, Grade 4: People make choices because they can't have everything they want.
  - Benchmark 5, Grade 4: The opportunity cost of an activity is the value of the best alternative that would have been chosen instead. It includes what would have been done with the money spent and the time and other resources used in undertaking the activity.
- Standard 10: Students will understand that Institutions evolve and are created to help individuals and groups accomplish their goals. Banks, labor unions, markets, corporations, legal systems, and not-for-profit organizations are examples of important institutions. A different kind of institution, clearly defined and enforced property rights, is essential to a market economy.
  - Benchmark 2, Grade 4: Saving is the part of income not spent on taxes or consumption.

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- Standard 13: Students will understand that income for most people is determined by the market value of the productive resources they sell. What workers earn primarily depends on the market value of what they produce.
  - Benchmark 2, Grade 4: People can earn income by exchanging the use of their labor (physical or mental work) for wages or salaries.

## **National Standards in Personal Finance**

Knowledge Statements

Saving and Investing

- Statement 1, Grade 4: People save for future financial goals.
- Statement 2, Grade 4: Every saving decision has an opportunity cost.

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## **Economic Concepts**

Earning income

Opportunity cost

Saving

Savings goal

Short-term savings goal

Long-term savings goal

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## **Mathematics Concepts**

Addition

Subtraction

Estimation

Problem solving

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## **Objectives**

Students will:

- Define earning income, opportunity cost, saving, savings-goal, short-term and long-term savings goal.
- Identify the opportunity cost of a decision.
- Give an example of a savings goal.
- Explain the difference between long and short-term savings goals.

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## Time Required

60 minutes

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## Materials

- *Beatrice's Goat* by Page McBrier
  - One copy of Handouts 1, 2, and 3 for each student
  - Small glass jar
  - Tokens such as beans
  - Visual of Handout 3
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## Procedures

1. Tell students that you want to buy a new car. Your current car is 10 years old. Explain that you don't have enough money right now to buy a new car. Ask the students if they have ever wanted something, but couldn't buy it because they didn't have enough money. Have students explain how they handled their problem. (*went without, saved money until they had enough, asked for it as a gift*)
2. Point out that their solutions are good ones. Explain that you are leaning toward saving each month for your new car. Explain that **saving** means not spending and putting your money aside for use later.
3. Explain that you have saved for things in the past. Tell students that you wanted a new pair of shoes. The price of the shoes was \$69.99. You didn't have \$69.99, so you decided to save. Your savings goal was \$69.99, enough to buy the shoes. You put some money aside each week and didn't spend it until you reached your goal. A **savings goal** is a good or service that you want to buy in the future.
4. Explain that saving for the shoes was a **short-term savings goal**. It was a relatively small amount of money, and it only took a few weeks for you to reach your goal. However, your new savings goal—a new car is a long-term savings goal. A long-term savings goal involves a larger amount of money and requires a longer time to reach.
5. Tell students that they will listen to a story about a girl named Beatrice who didn't have enough money to get something that she wanted very much. Ask students to listen for Beatrice's savings goal and how she achieved her goal.

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6. Read the book, *Beatrice's Goat*. Discuss the following:
  - What did Beatrice yearn to do? (*Go to school*)
  - Why couldn't she go to school? (*Her family wasn't able to save the money to buy the uniform and books she needed to attend school.*)
  - How did the goat, Mugisa, help Beatrice's family? (*It provided them with milk.*)
  
7. Explain that **income** is payment people earn for work that they do.
  - How did Beatrice earn income? (*She milked the goat and sold the goat's milk.*)
  - What did Beatrice do with the coins that people paid her for the milk? (*She saved them in a small woven purse.*)
  - What was Beatrice's savings goal? (*She wanted to save enough to buy a new shirt for Moses and a warm blanket for the bed she shared with Grace.*)
  - What was her mother's short-term savings goal? (*She wanted to save enough money to pay for a uniform and books so Beatrice could go to school.*)
  - What was the mother's long-term savings goal? (*She wanted to build a house with a steel roof that didn't leak when it rained.*)
  - Beatrice named the goat Mugisa because it means luck. Was this a good name for the goat? Explain. (*Yes, the goat brought good luck to the family. By selling its milk, Beatrice was able to save enough to buy a uniform and books for school, and the family was also able to save enough money to build a new house.*)
  
8. Distribute a copy of *Handout 1: Estimation* to each student. Read the instructions and allow time for students to complete the worksheet individually, with a partner, or as a class. Review student answers (*no, yes, yes, no*) Ask students to explain their procedure for estimating.
  
9. Remind students that there are several ways to solve math problems. On the handout they just completed, they used addition and estimation skills to determine if enough money had been saved. Explain that student will use subtraction on the next handout to determine how much more money must be saved to meet the savings goal.
  
10. Distribute a copy of *Handout 2: How Much More?* to each student. Read the instructions and allow time for students to complete the worksheet. Review student answers. (*\$12.94, \$9.33, \$8.34*) Ask students to explain their procedures for determining answers.

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11. Explain that students will now have an opportunity to set their own savings goal for the class. List three activities on the board such as a popcorn party, watching a video, and an extra outdoor recess.
12. Explain that students will have to vote for the one activity they would most like to do. Remind students that they may only vote once. Allow students to vote. Circle the activity that receives the most votes.
13. Explain that this activity is the savings goal for the entire class and that they will have an opportunity to earn and save in order to have the activity. Display a small glass jar. Explain that to earn the activity, the class must fill the glass jar. Students will be rewarded with beans (other small tokens) for behaviors. Generate a list of class behaviors for which the students can be paid. These might include following class rules or receiving compliments for behavior from teachers in the hallways, lunchroom or during special classes.
14. Explain that each time students complete one of the behaviors on the list, they will earn a small handful of beans that will be kept in the jar. When the jar is full, the students will have saved enough beans to earn their chosen activity.
15. Review with the students their savings goal. (*To save enough beans to earn the activity they voted for as their first choice.*) Also, review how they will reach their savings goal. (*They will earn beans for achieving agreed upon behaviors.*)
16. Ask students to determine what the class gave up when it selected the activity that received the most votes. (the second choice) Point out that by choosing the activity that received the most votes, students lost the opportunity to do their second choice. The second choice was the cost of getting their first choice. Explain that what is given up to get the first choice is called the opportunity cost. **Opportunity cost** is the highest-valued alternative given up when a decision is made.
17. Give students an example. Tell them that you had to decide how to use an hour of time. You could read a book, go shopping, or go to the gym. You didn't have enough time to do all three. You decided to read a book. Your opportunity cost is going to the gym—because that was your second choice—it was what you would have done had you not decided to read the book.
18. Ask students what they would choose to do if there were an extra one-half-hour of recess—play soccer or run races. Ask a student to share his or her choice and his or her opportunity cost. Allow other students to share.

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19. Ask students to share examples of choices they have made, tell why they had to make a choice and identify the opportunity cost. Remind the students that Beatrice and her family made choices. Discuss the following:
- What was the opportunity cost for Beatrice's family of saving coins? *(The family didn't use the money to buy things they needed immediately.)*
  - What was the opportunity cost of using the savings for Beatrice's uniform and books? *(the blanket for the bed, a new shirt for Moses and it would take longer to save for the new house)*

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## Closure

20. Review the key concepts in the lesson by asking the following questions.
- What is income? *(payment for work)*
  - How do people earn income? *(by working)*
  - What is saving? *(money not spent but put aside to be used later)*
  - What is a savings goal? *(a good or service we hope to buy in the future)*
  - What have you saved for? *(Answers will vary, but may include games, toys, books, movies and candy.)*
  - How are short-term and long-term savings goals different? *(Usually short-term savings goals cost less and can be reached in a shorter time than long-term savings goals.)*
  - Give an example of a short-term savings goal for you. *(candy, a movie ticket, a small toy)*
  - Give an example of a long-term savings goal for you. *(a video game system, a movie on DVD, money for vacation spending)*
  - What is opportunity cost? *(The highest-valued alternative given up when a choice is made. The second choice.)*
  - What is the opportunity cost of saving? *(The things that you can't buy now.)*
  - On Friday night, you could spend the night with a friend or go for pizza and a movie with your family. What would you choose to do? *(Answers will vary.)*
  - What would your opportunity cost be? *(If they choose to spend the night with a friend, the opportunity cost is pizza and a movie. If they choose pizza and a movie, their opportunity cost is spending the night with a friend.)*

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## Assessment

21. Distribute a copy of *Handout 3: Savings Goal* to each student. Allow time for students to complete the activity. Review student answers. (*\$7.72, 4 weeks, the opportunity cost would be the item not circled*)
  
22. (Optional activity)—Explain to students that the book, *Beatrice's Goat* is based on a true story. The Heifer Project International is a charitable organization that donates livestock to poor communities around the world. Have students determine an amount of money they would like to donate to the Heifer Project. This would be their savings goal. Help them determine a way they could earn and save enough money to reach this goal.

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## Handout 1: Estimation

Directions: Use estimation to determine if each student has enough saved to reach his or her savings goal.

Student	Savings Goal	Amount Saved	Yes or No
Josh	\$20.00	\$8.96 \$10.12	
Tina	\$15.00	\$0.79 \$3.00 \$11.51	
Sam	\$10.00	\$4.25 \$5.50 \$0.75	
Chantelle	\$25.00	\$7.96 \$12.59 \$2.99	

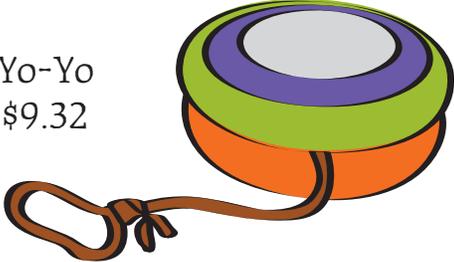
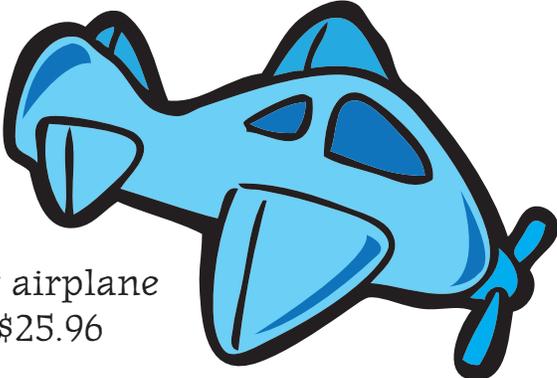
Direction: Work with a partner. Create a similar estimation problem using the chart below. Exchange with your neighbors. Use estimation to solve your neighbor's problem

Student	Savings Goal	Amount Saved	Yes or No

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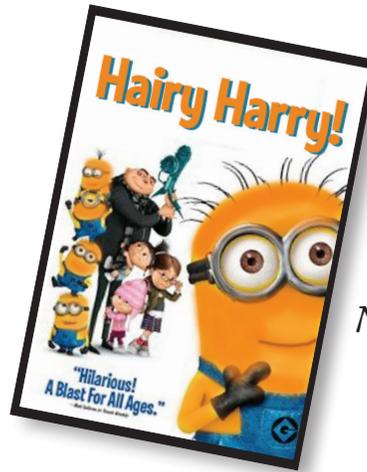
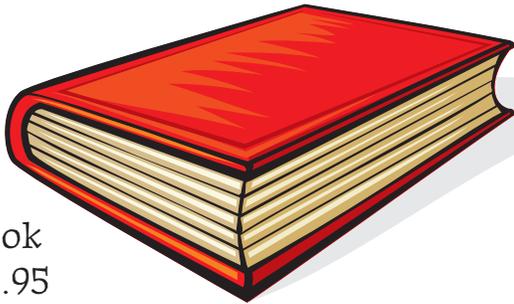
## Handout 2: How Much More?

Directions: Determine how much must be saved to meet each savings goal.

Savings Goal	Amount Saved	Amount needed
 <p>Teddy Bear \$15.78</p>	\$6.45	
 <p>Yo-Yo \$9.32</p>	\$0.89	
 <p>Toy airplane \$25.96</p>	\$13.02	

## Handout 3: Savings Goal Assessment

Book  
\$18.95



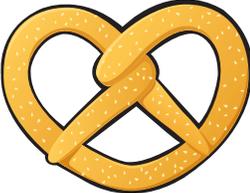
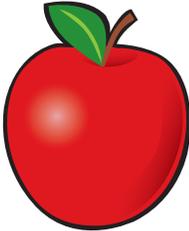
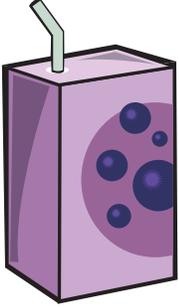
Movie DVD  
\$18.95

1. Circle the item you would like to have.
2. What is the opportunity cost of your choice? \_\_\_\_\_
3. What is your savings goal? \_\_\_\_\_
4. If you have \$11.23 cents, how much more do you need to reach your goal? Show how you reached your answer.
5. If you save \$2.00 each week, how long will it take you to reach your savings goal? Show how you reached your answer.
6. Write a sentence describing a long-term savings goal for you, and explain why this is a long-term savings goal.

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## Visual 1: Snack Attack Assessment

Directions: Look at the Snack Machine below. On the line under each picture, write the address for the snack using the column numbers and the row letters. You may only have one snack. Which snack will you choose?

Snack Machine			
	1	2	3
A	 Pretzel _____	 Cookie _____	 Chips _____
B	 Apple _____	 Milk _____	 Juice _____

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## Visual 1: Snack Attack Assessment, cont.

Directions: Use the decision-making grid below to help you make your decision.

- In column 1, rows C, D, E, F, G, and H, the alternatives from the snack machine are listed for you.
- In row B, columns 1 and 2, write criteria—things that are important for you to think about when you decide on your snack.
- For each alternative in each row, draw a happy or sad face in column 1 and a happy or sad face in column 2.
- If the snack meets the criteria you have chosen, draw a happy face. If it doesn't, draw a sad face.

Row A	Alternatives(Column 1)	Criteria	
		Column 2	Column 3
Row B			
Row C	Pretzel		
Row D	Cookie		
Row E	Chips		
Row F	Apple		
Row G	Milk		
Row H	Juice		

Fill in the blanks below.

1. I decided on \_\_\_\_\_ for my snack.
2. My second-choice is \_\_\_\_\_.
3. Because I decided to get \_\_\_\_\_, my opportunity cost is \_\_\_\_\_.