Less Than Zero

By Stuart J. Murphy / ISBN: 0-06-000126-7

Lesson by:

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Lesson Description:

In this lesson, students learn about saving, savings goals, interest, borrowing and opportunity cost by reading *Less Than Zero* by Stuart J. Murphy. Students use a number line and a line graph to track spending and borrowing in the story.

Age Level:

8-10 year olds

Content Standards:

- National Voluntary Content Standards in Economics
  - Standard 2, Benchmark 2 for Grade 4: Saving is the part of income not spent on taxes or consumption.
- National Standards in Personal Finance:
  - Saving and Investment Standards, Grade 4 Benchmarks:
    1. People save for future financial goals.
    2. Every saving decision has an opportunity cost.
  - Spending and Credit Standards, Grade 4 Benchmarks:
    2. People pay for goods and services in different ways.
    3. Borrowing money to buy something usually costs more than paying cash, because there is a fee for credit.
    4. Responsible borrowers repay as promised, showing that they are worthy of getting credit in the future.

Concepts:

Borrowing
Interest
Saving
Savings goal

Objectives:

Students will be able to:

1. Define saving, savings goal, and interest.
2. Identify a savings goal.
3. Explain the difference between saving and borrowing.
4. Use a line graph.

Time Required:

60-90 minutes

Materials:

- *Less Than Zero* by Stuart J. Murphy
- A copy of Activity 1 for each student
- Transparency 1
- A pencil for each student
- Overhead projector pen

Procedures:

1. Explain to the students that you will be teaching a lesson based on a story titled *Less Than Zero*. Ask the students what the title of the book might mean. *(Answers will vary.)*

2. Show students the cover of the book and tell them that the story is about a penquin, Perry, who is trying to save clams to buy a new scooter. Explain that clams for Perry are what pennies, other coins and dollars are to us. Perry uses clams to buy goods and services.

3. Display Transparency 1. Ask students what is pictured on the transparency *(graph)*. Explain that a graph is a picture that compares two sets of data.

4. Ask the students if they know the correct name or term for numbers that are "less than zero." *(negative or minus numbers)* Ask students if they know what negative numbers would represent with money. *(Answers will vary.)* Explain that negative numbers with respect to money mean that a person owes money to someone else or that a person spent money that wasn't his or hers.

5. Distribute a copy of Activity 1 and a pencil to each student.

6. Begin reading the story. At the end of page 5, ask the following questions:

   a. What did Perry want to buy? *(a scooter)*

   b. How much does a scooter cost? *(nine clams)*

Procedure continued:

c. What did Perry's dad say Perry would have to do to buy a scooter? *(Save nine clams.)*

d. How many clams did Perry have? *(zero)*

7. Tell the students that **saving** means not spending money now but instead keeping the money to use to buy things in the future. Perry had a **savings goal**. Perry's goal was to buy a scooter. People usually save with a savings goal in mind. The savings goal is something they want in the future.

8. Begin reading again. Stop at the end of page 9 and ask the students the following questions:

   a. What did Perry do to earn four clams? *(He worked for his mother.)*

   b. What kind of graph is Perry making? *(a line graph)*

9. Display Activity 1 again. Tell students that they will create a graph like Perry's. Enter the following on the transparency and have students work alone on their graphs.

   - On the left side of the graph, number the lines (not the spaces) from 1-10, going up from 0.
   - On the blank line along the left side, label the y-axis *Number of Clams*.
   - On the blank line at the bottom, label the x-axis *Days of the Week*.
   - Place a dot at the coordinates (Sunday, 0), then another dot at (Monday, 4).
   - Connect the dots.

10. Begin reading again. At the end of page 13, ask the students the following questions:

    a. Is Perry spending or saving? *(spending)*

    b. On what is he spending his clams? *(the Ice Circus)*

    c. Why does Perry say that he has minus one clam? *(He owes Fuzzy one clam.)*

    d. How can we show that on the graph? *(Model on the transparency—below the zero line, write numbers -1 to -3—and have students do the same. Place a dot at (Tuesday, -1), then connect the dots.)*

10. Continue reading the story until the bottom of page 17. Ask the students the following questions:

    a. Is Perry spending or saving? *(spending)*

    b. How did Perry pay for a fishy treat? *(He borrowed two clams from Baldy.)*

    c. After borrowing from Baldy, how many clams less than zero was Perry? *(three)*

Procedure continued:

11. Show the picture on page 17. Model on the transparency by placing a dot at (Wednesday, -3) and have students fill in their graphs.

12. Explain that **borrowing** and saving are opposites. When people save, they put money away to spend in the future. When people borrow, they take money from another person—with a promise to repay the money in the future—and then they spend the borrowed money. Perry borrowed from Baldy and will have to repay Baldy in the future.

13. Continue reading the story until the bottom of page 21. Ask the students the following questions:

    a. Why didn't Perry want to go outside? *(His friends all had scooters and he didn't.)*

    b. Where did Perry find a clam? *(under the couch)*

    c. What did he do after he found the clam? *(started a clam search)*

    d. How many clams did Perry find on his search? *(eight clams)*

    e. How many clams will Perry have after he repays Baldy and Fuzzy? *(five clams)*

14. Show the picture on page 21. Model on the transparency by placing a dot at (Thursday, 5) and have the students fill in their graphs.

15. Ask the students why Perry wished he hadn't borrowed the three clams. *(If he hadn't borrowed the clams, he would have eight clams and would only need to save one more to buy a scooter.)*

16. Continue reading the story. At the end of page 25, ask the students the following questions:

    a. What happened? *(Perry lost all eight clams.)*

    b. What do you think will happen next? *(Answers will vary.)*

17. Model on the transparency by placing a dot at (Friday, -3) and have the students fill in their graphs.

18. Finish reading the story. Ask the following questions:

    a. What happened? *(Mr. Spike found the lost clams and gave them to Perry.)*

    b. How did Perry get the rest of the clams he needed to buy the scooter? *(Mr. Spike gave them to Perry, but Perry agreed to work for Mr. Spike.)*

    c. How many clams did Perry earn each day for shoveling snow? *(one clam)*

    d. How many days did he have to work to reach a total of nine clams? *(four days)*

Procedure continued:

19. Model on the transparency by placing a dot at (Saturday, 5) and have the students fill in their graphs.

20. Ask the students if they have ever had a savings goal like Perry's. *(Answers will vary.)* Explain that people save to buy things in the future. Ask the students to identify a savings goal—something for which they would like to save. Suggest to the students that they can begin to save coins in a piggy bank, jar or small box. When the container is full, they can have a relative take them to a bank to open a savings account with the money they save.

21. Explain to the students that when people save in a savings account at a bank, the bank pays interest. **Interest** is money the bank pays its customers for keeping their savings at the bank. Earning interest from the bank helps people reach their savings goals more quickly. Discuss the following:

    a. How would putting his clams in a savings account at a bank have helped Perry? *(Answers will vary, but should include the following: He would earn interest so that he would reach his goal more quickly, his money would have been safe, he wouldn't have lost his eight clams and he would have been less tempted to spend the clams if they were in the bank.)*

    b. How did borrowing for the Ice Circus and for fishy treats keep Perry from reaching his goal? *(Before he could save money for the scooter, he had to earn money to repay what he borrowed. So it took him longer to reach his goal.)*

22. Have students create and write their own titles on their graphs.

23. Display students' graphs on a bulletin board titled *Perry's Saving Story*.

Closure:

1. What is saving? *(Saving is not spending money now but keeping it to use to buy things in the future.)*

2. What is a savings goal? *(A savings goal is something you save for now in order to buy in the future.)*

3. What is interest? *(Interest is money the bank pays its customers for keeping their savings in the bank.)*

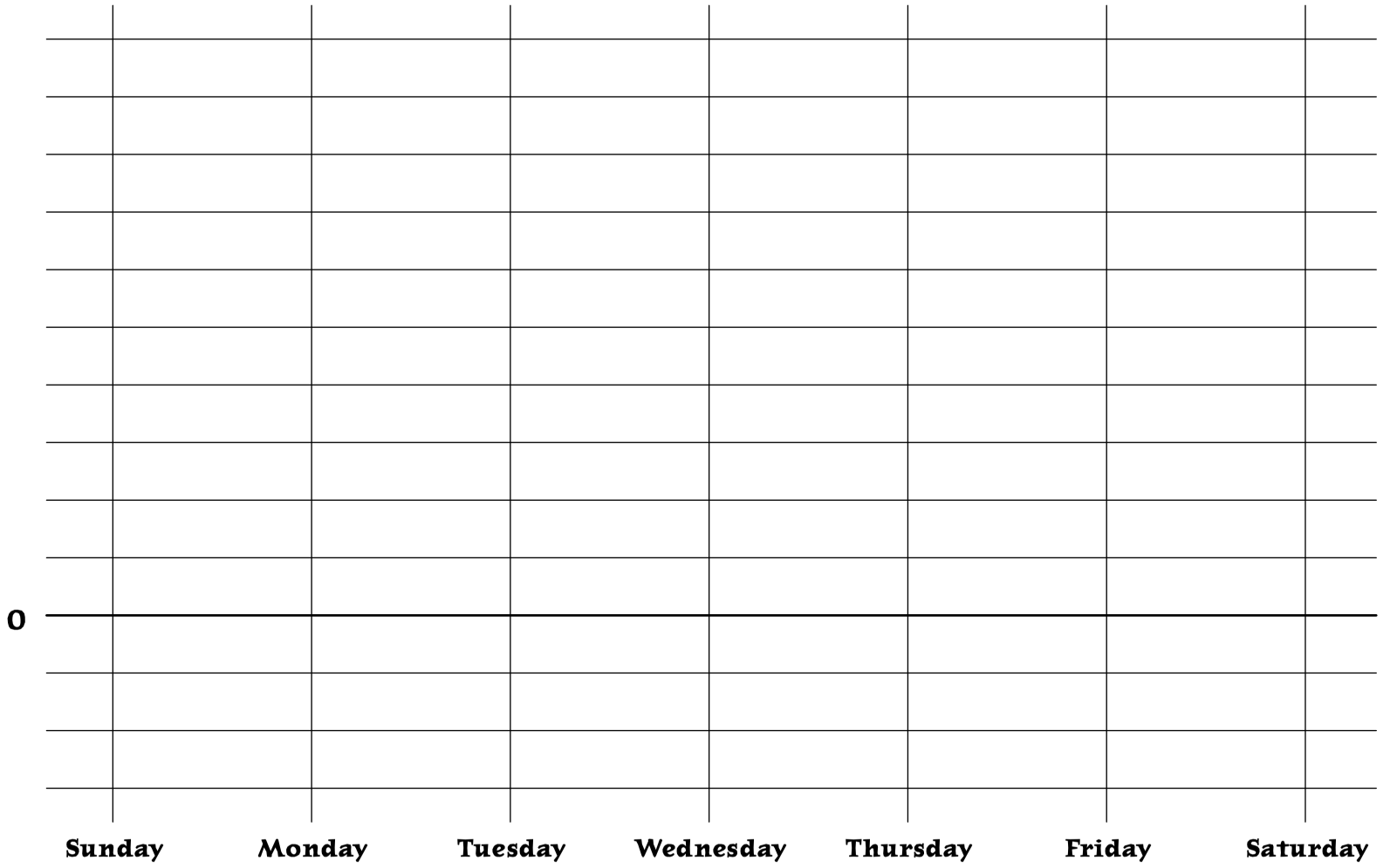
4. What is the difference between saving and borrowing? *(When people save, they put money away to spend in the future. When people borrow, they take money from another person with a promise to repay the money in the future. They spend the borrowed money now.)*

Assessment:

Ask the students to complete one or more of the following:

1. Write a paragraph in which you describe what advice Perry should give to other penguins who want to buy something but don't have the money to do so. Include the ideas of saving, savings goal, interest and borrowing.
2. Write about a time when you had to borrow money to buy something or for an activity (a "less than zero" experience). In your story, explain why borrowing is the opposite of saving. Include how you repaid the loan. If you have never borrowed, write a fiction story that involves borrowing.

Activity 1 • Line Graph



Transparency 1 • Line Graph