

Lesson Two: Saving for Now and the Future

Goal

Students will use fractions, percents, and decimals to calculate interest rates

Materials

milk jugs, shoe boxes, art supplies, slips of paper, dice -- 2 per group -- to be used as "multiplication cubes," markers

Lesson Plan

- 1) Ask "Is there an item you want to buy? What is something you would like to use your money to buy this week, this month, or this year?" On the board, list student wants.
- 2) Explain that it is important to have goals, and it is equally important to save money for the unexpected. ("An example of an unexpected expense would occur if you auditioned for the school play and learned you had to buy your own costume.")
- 3) Divide students into groups of five.
- 4) Roll the multiplication cubes to determine who will be the BANKER. (Person with the highest number rolled.) All other students will be citizens of the community.
- 5) Give a shoe box to each of the groups' identified bankers. The banker will use the shoe box to create a commercial bank. Ensure that they understand the following items that they will place on the bank: hours of operation, name of the bank, member of the FDIC (Federal Deposit Insurance Corporation), ATM, etc)
- 6) Give milk jugs to the citizens to decorate as piggy banks. (Remind students to include the piggy's eyes, nose, mouth, legs, tail, ears and money slot.)
[Note to the teacher: the art work on the "commercial banks" and "piggy banks" could be done at home with parents' help.]
- 7) Introduce the following rules of the game:
 - Student to the right of the banker goes first.
 - Student rolls the multiplication cubes and multiplies the two factors on the top of the multiplication cubes. States the answer to the banker.
 - Banker inputs the factors into a calculator and determines if the answer was correct. If correct, student receives a \$100 note and writes his or her name on the back.
 - Student decides to place the \$100 note in the piggy bank for a day or in the commercial bank for a year.
 - Then it is the next student's turn.
- 8) If time permits, allow the game to go on for a minimum of five rounds.
- 9) Declare the game over. Instruct everyone to return to their seats.
- 10) Tell the students with piggybanks to count their money and collect that information on the board. If a student puts all their money in the bank for a year, skip them.
- 11) Explain that money deposited in a commercial bank can earn interest. To determine how much interest, one must look at three things:
 - Amount of money
 - Length of time
 - Interest rate
- 12) Explain that, in the game, the student could invest the \$100 in the commercial bank for a year. To determine how much a \$100 deposit will earn in one year, students will need to multiply the deposit amount (\$100) by the interest rate (5% or .05) Note for the class that 5% means 5 out of 100.
- 13) Ask "How much money is 5% of \$100?" Write the answer on the board -- $\$100 \times .05 = \5 .
- 14) Ask one banker to come to the front of the room and share what money is in his/her bank. For each \$100 note placed in the bank, the banker shall give the depositor a \$5 note. Explain "After one year, your balance will be the original savings amount, plus the interest earned ($\$100 + \$5 = \$105$)."
- 15) Have the banker do this for each deposit that was placed in his or her bank.
 - Collect that information on the board.
 - Continue through all the bankers.
- 16) Debrief with your students, asking who completed the game with the most money? Was it those who put their money in the piggy bank? Or was it those who deposited their money in the commercial bank?
- 17) Explain "In year two, if those deposits remained in the bank instead of earning 5% interest on your \$100, you will earn interest on \$105. Interest earned on interest is called compound interest." Ask "How much interest will you earn in year two?" Write the answer on the board: $\$105 \times .05 = \5.25 . Have the banker give the depositor \$5.25. Students will add year one interest to year two interest to figure two years of interest (\$10.25). Ask "What is the account balance after two years?" (\$110.25)
- 18) Finally, have the students figure year three interest ($\$110.25 \times .05 = \5.51) and the bank balance after three years ($\$110.25 + \$5.51 = \$115.76$). Explain to students that, without compound interest, \$100 in savings would earn \$5 every year. With compound interest, every year, deposits will earn more interest than the initial year's \$5.
- 19) Provide your students with the following writing prompt:

The piggybank and the commercial bank are both great places to save money. Choosing between the piggybank and the savings account usually depends on your savings purpose. Think about two things that you would like to buy: one that would be better to save in a piggybank and one that would be better to save in a savings account at the commercial bank. Explain what those items are, which method you would choose to save for them and why you chose that method. Estimate for each item how long will it take to save enough money to purchase the item.