Money Math: Lessons for Life

Lesson 1   **The Secret to Becoming a Millionaire**

Lesson Description	Students learn how saving helps people become wealthy. They develop "rules to become a millionaire" as they work through a series of exercises, learning that it is important to: (1) save early and often, (2) save as much as possible, (3) earn compound interest, (4) try to earn a high interest rate, (5) leave deposits and interest earned in the account as long as possible, and (6) choose accounts for which interest is compounded often. This lesson assumes that students have worked with percents and decimal equivalents.
Objectives	Students will be able to: 1. define saving, incentive, interest, and opportunity cost. 2. solve problems using interest rate, fractions, decimals, and percentages. 3. calculate compound interest. 4. explain the benefits of compound interest. 5. explain the opportunity cost of saving. 6. describe a savings bond investment.
Mathematics Concepts	percent, decimal, data analysis, number sense, solving equations, problem solving
Personal Finance Concepts	interest, interest rate, compounding, wealth, saving, savings, inflation, purchasing power
Materials Required	• copies of Activities 1-1 through 1-5 for each student • transparencies of Visuals 1-1 through 1-7 • calculator for each student • computers
Time Required	4 - 6 days
Procedure	**Get Ready** 1. Ask the following. Do you want to be a millionaire? What is a millionaire? Explain that a **millionaire** is a person who has wealth totaling one or more million dollars, noting that **wealth** is the total value of what a person owns minus what he or she owes. How could you become a millionaire? (*win the lottery, win a sweepstakes, inherit a million dollars, earn a high income*) Read the following scenario to the class.

Last week, Mrs. Addle told her students that they could become millionaires if they followed the rules she provided them. As a matter of fact, she guaranteed that if they followed her rules exactly, they would be millionaires in 47 years! Misha and the rest of her classmates thought that Mrs. Addle was crazy. If she had rules that would guarantee that someone could be a millionaire, why was she teaching seventh-grade math? Why wasn't she rich and retired? Why didn't she follow her own rules? Mrs. Addle told the students to go home and talk to their families about what she had said.

Misha went home and told her family what Mrs. Addle had said. Misha's mother knew a lot about money and financial matters. She just smiled at Misha and said that Mrs. Addle was correct. When Misha returned to class the next day, Mrs. Addle asked what the students' families said. Of the 25 students in Mrs. Addle's class, 20 students said that their parents and other family members agreed with Mrs. Addle. The other five students forgot to ask.

2. Explain that to learn more about being a millionaire, the students must review what a percent is. (Note: If needed, Visual 1-1 includes a review.)

3. Point out that in the story, there are 25 students in Misha's class, and 20 students discovered that their families agreed with Mrs. Addle. Ask the following questions. (Note: Step-by-step calculations are provided on Visual 1-2.)

    a. What percent of the students' families thought that Mrs. Addle was correct? (*80%*)
    b. What percent of the students failed to do their homework? (*20%*)

Get Going

1. Explain that you will share Mrs. Addle's secrets with them. When they become millionaires, they can donate money to the school's math department! Discuss the following.

a.   How do you earn income? (*mow lawns, baby-sit, walk pets, rake leaves, do chores around the house*)

b.   What do you do with your income? (*save it, spend it, save some and spend some*)

c.   Why do you spend your income? (*to buy things that they want now, such as movies, food, and clothes*)

d.   Why do you save your income? (*to buy things they want in the future*)

2.   Explain that when people earn income, they can spend it or save it. When they are **spending**, they spend their money today for goods and services, but they give up the chance to use that money to buy goods and services in the future. When **saving**, they give up goods and services now to have other goods and services in the future. When people make choices, the highest-valued alternative choice that is given up is their **opportunity cost**.   Read the following scenario.

Next year, you want to take a family and consumer science class, a woodworking class, and a photography class. However, you only have room in your schedule for one of these three. Which would you choose? What would be your second choice?

3.   Have several students share their first and second choices. Explain that their second choice is their opportunity cost—it is the highest-valued alternative class. When people save, the goods and services that they would have purchased now—the highest-valued alternative—represent their opportunity cost. When they spend now, their opportunity cost is goods and services they could have in the future.

4.   Assign Activity 1-1. When they are finished, have students share answers. *(1. $360, $720, $1080, $1440, $1800, $2160; 2. The items they would have purchased each day with $2. This is their opportunity cost. 3. A + (B x 180) where A = previous year balance and B = the amount deposited each day; 4. Save more each day.*) Point out that students have different opportunity costs because their tastes and priorities are different.