

Learning, Earning and Investing

Interactive: Compound Interest Calculator

Teacher Guide

The purpose of the Compound Interest Calculator is to demonstrate the power of compound interest to your students. In the words of Albert Einstein, "compounding is the greatest mathematical discovery of all time." By experimenting with the Compound Interest Calculator, students should see that it pays to save early and often. Here are some questions that you can use with your students to drive this point home.

1. If you save \$120 per month at 8% annual yield beginning at age 30, how much savings will you have accumulated by age 65? (\$275,175) Will this be primarily principal or interest? (Interest)
2. If you start saving \$120 per month at 8% annual yield at age 20 rather than 30, how much savings will you have accumulated by age 65? (\$632,850) How much more will you have accumulated by starting at age 20 rather than age 30? (\$357,675) How can this be? (Ten more years of compounding make a huge difference.)
3. If you start saving \$200 rather than \$120 per month at 8% annual yield at age 20, how much savings will you have at age 65? (\$1,054,735)
4. Is 8% a reasonable rate of return? (It is slightly less than long-term returns in the stock market. However, if you want safer investments, it may be unrealistic.)
5. How can a person of moderate income become a millionaire before retirement? (By saving early and often and by shopping for a higher rate of return commensurate with the risk one is comfortable with)

Web Addresses:

Learning, Earning and Investing Web Site:

- <http://lei.ncee.net>

Compound Interest Calculator:

- <http://lei.ncee.net/interactive/compound/>