

Investing: Compound Interest

MODULE 11



PACIFIC NW
FEDERAL CREDIT UNION

Questions?
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Compound Interest

Grades: 7-12

Objectives:

- Students will understand the relationship between time and compound interest.
- Students will know how to use compound interest calculators to find simple and compound interest.

Pre-learning - Students should have basic knowledge of the simple interest and compound interest equations. If you haven't used our Simple and Compound interest lesson – start here!

Module 9: Compound Interest <https://www.pnwfcu.org/resources/school-resources/high-school/>

Procedure:

1. Begin class with the PowerPoint on the screen as students walk in.
2. Explain the penny problem. If offered \$750,000 or 1 penny that doubled daily for a month, what option would students choose. Having the students silently write down their choice is helpful because then students can't influence other student's decisions.
3. When every student has made their decision, move forward with the PowerPoint to show students that the penny is the far better option because of compounding interest.
4. Discuss the choices the students made and emphasize that the lesson learned is that in any financial decision, DO THE MATH because the math never lies.
5. The next big idea is TIME. The "Stop and Discuss" asks students, "Why is compound interest important for high school students to understand?"
 - a. One possible answer: Because as you graduate you will begin to get jobs and make money. A small amount of money invested while young will have the opportunity to grow to a greater amount than if the same amount were invested 10 years later. If you don't start to think about investing while young, your money won't have the benefit of time to grow.
6. For the next section students will need to have a device available to them. If your classroom permits it, a phone will work, or any other device that has a internet connection.
7. Have students look up the compound interest calculator shown on the powerpoint. Walk them through each of the following terms:
 - a. Initial Investment
 - b. Monthly Contribution
 - c. Length of time in years
 - d. Estimated Interest Rate
 - e. Compound Frequency

Note: Interest Rate Variance Range is the final term – for the purpose of this lesson, we won't be using that portion of the calculator.

8. Have students use the Compound Interest Calculator to solve the compound interest scenarios.
9. Next introduce students to the loan calculator. And review the following terms:
 - a. Home Price

- b. Down Payment
 - c. Loan Term
 - d. Interest Rate
10. Have students use the loan calculator to figure out the questions on the Loan Scenarios slide (Slide 13). The answers are on the following slide so only move on when students have had the opportunity to solve on their own.
 11. Stop and Discuss: Why is it important to “shop rates” when making a major purchase?
 12. Watch the video on slide 17 discussing compound and simple interest.
 13. Stop and Discuss: As a borrower, what kind of interest would you want to pay? As an investor, what kind of interest would you want to earn?
 14. The PowerPoint closes by asking students to write a letter to a their graduating niece or nephew. Students can be funny and creative with their letter, the only goal is that they impart the knowledge they learned in this lesson upon their fictitious niece or nephew using the following terms: Compound, Time, Investment, Return.
 15. When finished with the lesson have students complete the Compound and Simple Interest Maze. If learning the equations, have students plug in the information for each space on the maze. If simply trying to teach the difference between compound and simple interest, allow students to use the online calculators.