



Educator Guide

Building Savings: How your Money can Grow

Azori Sparks and Ann Vail, Ph.D.

Objective:

- Explain Compound Interest

Resources for this Lesson:

- Educator Guide: *Building Savings: How Your Money Can Grow*
- PowerPoint Presentation: *Building Savings: How Your Money Can Grow*
- Content Guide: *Building Savings* PDF

Participant Packets Should Include:

- PowerPoint Presentation Handout (3 slides per page) - *Building Savings: How Your Money Can Grow*

Key Points**For Educator: What to Say****For Learner:**

<p>Slide #1: Building Savings: How Your Money Can Grow</p>	<p>Introduce Yourself.</p>	<p>Participant Introductions.</p>
<p>Slide #2: Objective:</p> <ul style="list-style-type: none"> ▪ Explain How Your Money Can Grow Due to Compound Interest 	<p>Explain: By the end of this lesson, you will be able to explain how your money can grow due to compounding interest.</p>	
<p>Slide #3: Compound Interest</p> <ul style="list-style-type: none"> ▪ Interest earned on an investment at periodic intervals and added to the original amount of the investment. Future interest payments are calculated and paid at the original rate but on the increased total of the investment. This is really interest paid on interest. ▪ Interest can be compounded: <ul style="list-style-type: none"> - Daily - Monthly - Quarterly 	<p>Question: <i>We talk about making money grow. Does anyone know what “making your money grow” means?</i></p> <p>Explain: Money can grow because of the power of compounded interest. This simply means that you earn money on the interest you leave in your account.</p> <p>Compound interest can be defined as interest earned on an investment at periodic intervals and added to the original amount of the investment. Future interest payments are then calculated and paid at the original rate but on the increased total of the investment. This is really interest paid on interest.</p> <p>Interest can be compounded daily, monthly, quarterly or annually.</p>	<p>Discussion: Allow participants to explain what they think “making money grow” means.</p>

Key Points**For Educator: What to Say****For Learner:**

- Annually		
<p>Slide #4: Annual Compound Interest</p> <p>Year 1 \$1000 invested in an account that compounds 3% annually would earn \$30 after 12 months.</p> <p>Formula: \$1,000 @ 3% = \$30 interest/year Total = \$1,000 + \$30 = \$1,030.00</p>	<p>Explain: Let's work through this compound interest example.</p> <p>\$1,000 @ 3% interest compounded annually earns \$30 of interest at the end of one year. At the end of 12 months, you would have \$1,030.00.</p>	
<p>Slide #5: Annual Compound Interest</p> <p>Year 2 \$1030 invested in an account that compounds 3% annually would earn \$30.90 after 12 months.</p> <p>Formula: \$1,030 @ 3% = \$30.90 interest/year Total = \$1,030 + \$30.90 = \$1,060.90</p>	<p>Explain: If you reinvest the \$1,030 at a 3% annual interest rate, you would earn \$30.90 at the end of the second year, bringing your total investment to \$1,060.90.</p> <p>The extra \$.90 is the interest you earned due to compounding interest.</p>	

Key Points**For Educator: What to Say****For Learner:**

<p>Slide #6: Annual Compound Interest</p> <p>Year 3 \$1,060.90 invested in an account that compounds 3% annually would earn \$34.83 after 12 months.</p> <p>Formula: \$1,060.90@3%=\$34.83 interest/year Total=\$1,060.90+\$34.83= \$1,095.73</p>	<p>Activity: Let's see if we can calculate the interest you would earn at the end of year three.</p> <p>Instructor Note: Call on a volunteer to explain the calculation. Year 3 example will appear upon a second mouse click.</p> <p>Explain: At the beginning of year three, you could again invest this money and earn \$34.83 in interest at the end of 12 months.</p> <p>Your total investment would then equal \$1,095.73.</p>	<p>Activity: Participants will calculate the interest earned for year three. Instructor will call on a volunteer to share calculation formula and answer.</p>
<p>Slide #7: Annual Compound Interest</p> <p>Without Compound Interest \$1,000 x 3% = \$30/year \$30 x 10 years = \$300 \$1,000@3% for 10 years = \$1,300.00</p> <p>With Compound Interest \$1,000@3% for 10 years = \$1,343.90</p> <p>Difference = \$43.90</p>	<p>Explain: The extra interest due to compounding may not seem like much, but over the years the interest adds up. When you compare your investment of \$1,000 over a 10-year period, you can see that without compounding interest, you would earn \$300 in interest. However, with compounding interest, you earn an extra \$43.90.</p>	

Key Points**For Educator: What to Say****For Learner:**

<p>Slide #8: Annual Compound Interest</p> <p>Calculate: \$1000 Investment 7% Annual Compound Interest 2-Year Term</p>	<p>Explain: If you are able to get a higher interest rate, you will earn even more.</p> <p>Activity: Let's calculate the difference in what you would earn if you received 7% interest on the same \$1,000 investment after 2 years.</p> <p>Instructor Note: Formula is provided on Slide #9 for participants to review.</p>	<p>Activity: Participants will calculate the interest earned on investment. A volunteer will share how to calculate the investment.</p>
<p>Slide #9: Annual Compound Interest</p> <p>Formula: Year 1: \$1,000 @ 7% = \$70 interest/year Total = \$1,000 + \$70 = \$1,070.00</p> <p>Year 2: \$1,070 @ 7% = \$74.90 interest/year Total = \$1,070 + \$74.90 = \$1,144.90</p>	<p>Explain: Using the formula, you can determine that in the first year you will earn \$70 in interest.</p> <p>The second year of investing will yield \$74.90.</p>	

Key Points

For Educator: What to Say

For Learner:

<p>Slide #10: Annual Compound Interest</p> <p>Without Compound Interest $1,000 \times 7\% = \\$70/\text{year}$ $\\$30 \times 10 \text{ years} = \\700 $1,000@7\% \text{ for } 10 \text{ years} = \\$1,700.00$</p> <p>With Compound Interest $1,000@7\% \text{ for } 10 \text{ years} = \\$1,967.20$</p> <p>Difference = \$267.20</p>	<p>Explain: This example is the same \$1,000 invested at 7% interest. The difference in earning compounding interest over 10 years at this rate equals a \$267.20. This is a significant amount more than the \$43.90 earned on the same \$1,000 invested for 10 years at 3% interest.</p>																
<p>Slide #11: Compound Interest</p> <table border="1" data-bbox="134 959 684 1187"> <thead> <tr> <th></th> <th>No Interest</th> <th>5% Daily Compounding</th> </tr> </thead> <tbody> <tr> <td>Year 1</td> <td>\$365.00</td> <td>\$374.00</td> </tr> <tr> <td>Year 5</td> <td>\$1,825.00</td> <td>\$2,073.00</td> </tr> <tr> <td>Year 10</td> <td>\$3,650.00</td> <td>\$4,735.00</td> </tr> <tr> <td>Year 30</td> <td>\$10,950.00</td> <td>\$25,415.00</td> </tr> </tbody> </table> <p>End of Year 1 = \$9.00 End of Year 30 = \$14,465.00</p>		No Interest	5% Daily Compounding	Year 1	\$365.00	\$374.00	Year 5	\$1,825.00	\$2,073.00	Year 10	\$3,650.00	\$4,735.00	Year 30	\$10,950.00	\$25,415.00	<p>Explain: This table shows that even small amounts of savings add up. Look what happens when you save just \$1 a day and invest it at 5% interest with daily compounding interest.</p> <p>At the end of year one, you would have a total of \$365. Using the same calculations as explained earlier with the annual compounding interest example, you would earn an extra \$9 at the end of your first year. This brings your total investment to \$374.</p> <p>The real power of compounding interest shows at the end of 30 years. If you did not invest your money, you would have a total of \$10,950. By investing your money, you earn an extra \$14,465, bringing your 30-year investment</p>	
	No Interest	5% Daily Compounding															
Year 1	\$365.00	\$374.00															
Year 5	\$1,825.00	\$2,073.00															
Year 10	\$3,650.00	\$4,735.00															
Year 30	\$10,950.00	\$25,415.00															

Key Points

For Educator: What to Say

For Learner:

<p>Slide #12: Summary</p> <ul style="list-style-type: none">▪ Explained How Your Money Can Grow Due to Compound Interest	<p>total to \$25,415.</p> <p>Explain: Of course, not all savings accounts are the same. Compare the Annual Percentage Yields (APY's) of the savings products, not the interest rates. The higher the APY, the more interest you will receive.</p> <p>Lesson Summary: Congratulations! You have completed <i>How Your Money Can Grow</i> in this money mangement series of classes.</p> <p>We've covered information that has helped you to understand compound interest.</p> <p>Question: <i>Are there any questions?</i></p>	<p>Participant questions.</p>
--	--	-------------------------------