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## CHAPTER 5

## Compound Interest

## What is it and how does it work?

You have thought about your budget and you know how much money you have to save, spend, and share. Now, after you worked for your money, how can your money work for you? Making your money work for you means you use your money to make more money. One way to do that is by earning interest on the money you already have.

## WHAT EXACTLY IS INTEREST?

When you deposit money in a savings account at a bank, the money you deposit is called principal. The money you earn on your principal is called interest. You get to keep the interest. This is money the bank pays you to keep your money with them. Interest is earned after a period of time, like each month. Compound interest is what you earn on your principal after the first month that helps your money grow.

## WHAT IS COMPOUND INTEREST?

You deposited your principal in the bank and earned interest; they are added together to become your new principal. The next time you earn interest, you earn interest on your new principal. Every time you earn interest, it is added to your principal. Earning money on your principal and interest over and over again is compound interest. The longer your money is in a savings account, the more you earn. In addition, different banks offer different interest rates; the higher the interest rate, the faster your money will grow.

Noah saved \$100 from his allowance and birthday money. At the beginning of July, he deposited that money into a savings account at a local FDIC-insured bank. The bank pays 3 percent ( 3 percent $=.03$ ) interest compounded monthly. With only his $\$ 100$ deposit and compounding interest, how much will Noah have in his account by the end of the year?

Let's figure it out. Multiply Noah's $\$ 100$ principal by 3 percent interest. So, $\$ 100$ x . 03 equals $\$ 3$ in interest. Add the $\$ 100$ and $\$ 3$ to get Noah's new principal of $\$ 103$. At the end of the July, Noah will have $\$ 103$ in his savings account. For August, Noah's principal is $\$ 103$. Multiply by 3 percent ( $\$ 103 \times .03$ ) to figure out his compounding interest, which is $\$ 3.09$. Add that to $\$ 103$ and his new balance for August with interest is $\$ 106.09$.

You can see in the table below that Noah's $\$ 100$ deposit from July with 3 percent compounding interest has now earned $\$ 19.41$. All he did was leave his money in his account.

The power of compound interest and time is really important as you figure out budgeting, saving, spending, and sharing. Save your money in an FDICinsured bank and let your money work for you!

| Month | Principal | Interest | Balance |
| :---: | :---: | :---: | :---: |
| July | $\$ 100.00$ | $\$ 3.00$ | $\$ 103.00$ |
| August | $\$ 103.00$ | $\$ 3.09$ | $\$ 106.09$ |
| September | $\$ 106.09$ | $\$ 3.18$ | $\$ 109.27$ |
| October | $\$ 109.27$ | $\$ 3.38$ | $\$ 112.55$ |
| November | $\$ 112.55$ | $\$ 3.48$ | $\$ 115.93$ |
| December | $\$ 115.93$ |  |  |

## Student Questions

What is interest?
$\square$
What is compound interest?
$\square$
How does compound interest work?
$\square$
What two things are really important in the power of compound interest?
1.
2.

