



Wealth  
Management

# Understanding interest

What is interest and how does it work?  
(And how can you make it work better for you?)

In general, there are two ways that interest can be classified and defined. First is the charge (or expense) a borrower pays for using (borrowing) a lender's money. Second is the income someone receives when someone else uses their money.

When you invest your money into something that pays interest, think of it as letting someone else use your money in return for a fee. That fee is called the **interest rate**. Most investments that pay interest will also specify how long your money will be invested until it's repaid to you. This is called the **term of the investment**. The amount you choose to invest is known as your **principal amount**.

## The importance of interest

Part of turning a focus to overall savings should include determining how to invest and grow your savings in the most effective way, and this is where it becomes valuable to understand how interest works. In general, there are two basic forms of interest you can earn: **simple** and **compound**. Each is quite different in how it's calculated and how it may impact your investments over time.

## Differentiating the types of interest

Simple interest is when only the original investment amount earns interest, and it's paid periodically (e.g. annually or semi-annually) over the investment term. The interest payments stay the same over the term of the investment.

Consider the following example:

Initial investment	\$1,000
Rate/term	5% interest/year for five years
Annual interest payments	\$50
Total interest earned	\$250

Compound interest, on the other hand, is when the investment earns interest not only on the principal amount, but also on the interest that gets accumulated along the way. With a compound interest investment, you don't get the interest payments until the end of the investment term. Instead, the payments you would have received are reinvested and interest is then paid on that reinvested interest.

“Compound interest is the eighth wonder of the world. He who understands it, earns it...he who doesn't, pays it.”  
— Albert Einstein



Interested in finding out more about interest and other financial topics? Ask your RBC advisor about the RBC Wealth Management Financial Literacy program.

Using the same previous example, let's now apply compound interest:

<b>Initial investment</b>	\$1,000
<b>Rate/term</b>	5% interest/year for five years
<b>Annual interest payments</b>	
<b>Year 1</b>	\$50
<b>Year 2</b>	\$52.50
<b>Year 3</b>	\$55.13
<b>Year 4</b>	\$57.88
<b>Year 5</b>	\$60.78
<b>Total interest earned</b>	\$276.29

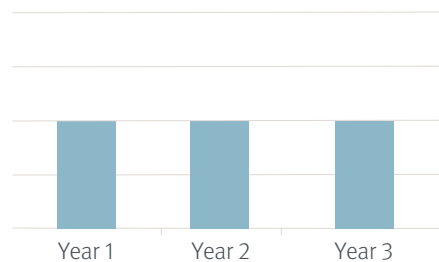
While the difference doesn't seem that large in this particular example, as your savings grow, the effects of compound interest will become increasingly pronounced.

Given the nature of compounding, the earlier you start saving, the faster you may be able to achieve your financial goals. With time acting as a key factor, even if you invest a small amount early on, the longer each dollar has to grow (as long as it's left untouched in the investment).

The following graph illustrates the differences in what happens to the principal, or the original investment amount, when simple or compound interest is applied over time.

### Simple interest

■ Principal (remains fixed over term)



### Compound interest

■ Principal (grows period over period)

