

## Title

## Snowball or Avalanche?

## LEARNING OBJECTIVE(S)

Students will:

- explore reasons people accumulate debt.
- compare the snowball and avalanche methods of debt repayment.
- analyze debt repayment options as they apply to a specific situation.


## Topic

Managing Debt

## Overview

How do you develop a plan for paying off debt? After discussing reasons people find themselves in debt, students work in small groups to learn about two popular debt repayment methods: the snowball and avalanche methods. Students explore two scenarios and discuss why individuals might prefer one method over another.

## Financial Literacy Theme

Debt repayment options

## 21st-Century Skill(s)

Critical Thinking, Collaboration, Communication

## Key Terms

Debt, collateral, wage garnishment, bankruptcy, snowball method, avalanche method

## Materials

- Internet access-at least one device with internet access per group of 4-5 students
- So Much Debt Student Capture Sheet-one copy per student


## Connect


#### Abstract

How does this connect to the student? Nearly everyone will take on debt at some point in their lives and some may amass debt they are unsure of how to repay. By exploring how long it takes some people to pay off debt, students may be encouraged to practice wise use of credit and avoid future credit problems.


> How does this connect to careers?

> Credit Counselor: When people find themselves facing debt they do not know how to repay, credit counselors can help them develop a plan. Often these plans go beyond debt to address budgeting and making lifestyle changes, as well. People who work in this field need to be good with both finances and working with people facing challenging situations.


#### Abstract

How does this connect to the world?

When people get themselves into too much debt, some file for bankruptcy to reduce it. While this does not completely absolve someone of all their debt, it can significantly reduce it. There are long-term consequences, though, for both the borrower and the lenders.


## Prepare

Background: No matter how much we advise students to use credit wisely, some may eventually end up facing debt that they are unsure of how to pay off. When people have more than one form of debt, there are two popular repayment methods that are referred to as the "snowball" and "avalanche" methods. These are particularly relevant to those who owe money to more than one lender. With the snowball method, the person in debt would pay the minimum monthly payment on all of their debts and then use any leftover money to pay down the debt with the lowest balance. Once that is paid off, the debt with the nextsmallest balance is paid. Proponents of this method value the quick wins that it can provide by focusing on the amount that is owed rather than the interest rate. In contrast to this, the avalanche method prioritizes interest rates over balances so the debt with the highest interest rate is paid first.

## Engage

- Write the word "debt" on the board.
- Ask students for a definition of the term debt. What does it mean to them? Define it as "something, often money, that is owed."
- Distribute sticky notes or slips of paper to students. Direct students to think of ways people get themselves into debt, write them down (one way per sheet), and post them on the board or wall near the word debt.
- Review student responses and cluster those that are similar. If not mentioned, discuss student loan debt, credit card debt, medical debt, mortgage debt, and (if desired) federal government debt. Explain that debt can have numerous consequences for people such as impacting a person's credit and loss of an item that was offered as collateral (such as repossession of a car or foreclosure on a home). In some cases, employers can be told by a court to direct a portion of a person's earnings to debt repayment (wage garnishment).


## Teach

- Inform students that, when people accumulate debt, it can often be difficult for them to imagine a way to repay it. Some struggle to know where to start while others may still have bad habits (like spending more than they earn) that need to end before they can address their debt. Some may think that bankruptcy is their only option.
- Tell students they will be researching two popular approaches to paying down debt-especially when the debt has been accumulated with multiple lenders. One has become known as the snowball method (pay off the debt with the smallest balance first) and the other as the avalanche method (pay off debt with the highest interest rate first).
- Divide the class into groups of 4-5 students. Direct students to search online for information about each method, with two students per group concentrating on each method.
- Allow students time to search online and share within their group what they learned about each method. What are the benefits and tradeoffs of each?
- Let students know there are online calculators that allow people to explore both options and see the difference each strategy can have—both on the time it will take to pay off debt and the total interest that will be paid.
- Distribute the So Much Debt Student Capture Sheet to students. Direct students to work in their groups and use an online calculator to compare the two methods for each scenario provided. Students may search for these calculators or you can direct them to use one from Forbes, Intuit, Undebtlt, or Credello.
- Ask students to share their results (correct answers shown below). What observations did they make? Were results the same when different calculators were used? Given their results, which method would they choose if they found themselves in debt? What would happen if Steve or Keisha could budget more each month for debt payments?


## Case 1 Answers

| Method | Months Until All Debt Is Paid | Months Until 1st Debt Is Paid | Interest Paid |
| :--- | :--- | :--- | :--- |
| Snowball | 38 months | 3 months | $\$ 2,197$ |
| Avalanche | 36 months | 17 months | $\$ 1,751$ |

Case 2 Answers

| Method | Months Until All Debt Is Paid | Months Until 1st Debt Is Paid | Interest Paid |
| :--- | :--- | :--- | :--- |
| Snowball | 53 months | 8 months | $\$ 4,076$ |
| Avalanche | 53 months | 29 months | $\$ 4,011$ |

- Engage students in a conversation about the benefits of each method and what is actually most successful. The math shows that the debt avalanche method will save people money in most cases, making it the most logical or rational choice. However, people don't always behave rationally. In fact, there is an entire field of study called behavioral economics that looks at how people often don't make the best decisions for themselves (like eating foods they know aren't good for them and spending more than they can afford). Social scientists have done research on people's use
of both the snowball and avalanche methods and found that people tend to be more successful using the snowball method. Because they pay off their first debt sooner in most cases, they are more likely to stick with their plan.
- Let students know that if they-or a loved one-ever find themselves in debt and struggling to figure out how to repay it, there are people who can help them. Credit counseling agencies provide assistance to individuals who are facing debt. In addition to looking at payment strategies, they may be able to negotiate with lenders to get better terms or work out a payment plan. As with any financial advice, people should do their homework before working with a credit counselor or other business promising to help them "fix their credit." Remind students that time and effort (paying bills on time, paying down debt, etc.) are the only sure ways to improve one's credit.


## Extend

- Outreach: Challenge students to create a short video or animation that explains the differences between the snowball and avalanche methods. How would they explain each in simple terms for their audience? Should they suggest which is better or let their viewers decide?
- Guest Speaker: Reach out to a local nonprofit credit counseling agency such as those affiliated with the National Foundation for Credit Counseling, and request that a credit counselor speak to your class.
- Family: Invite students to discuss what they learned about each method with their families. Some families may be dealing with debt of their own and could apply one of these methods toward its repayment. Students should be aware that some families may feel uncomfortable discussing debt with their children.


## Standards Correlation

The following standards are addressed in this activity.
National Standards for Personal Financial Education from the Council for Economic Education and Jump\$tart Coalition for Personal Financial Literacy

- V. Managing Credit 8-7 Borrowing increases debt and can negatively affect a person's finances.
- V. Managing Credit 12-10 Borrowers who face negative consequences because they are unable to repay their debts may be able to seek debt management assistance.
- V. Managing Credit 12-11 In extreme cases, bankruptcy may be an option for people who are unable to repay their debts.


## National Standards for Business Education from the National Business Education Association

- Personal Finance VII.1.17 Identify strategies for effective debt management.
- Personal Finance VII.1.23 Analyze the sources of assistance for debt management.
- Personal Finance VII.1.26 Explain the implications of foreclosure and bankruptcy.

Directions: Compare the use of the snowball and avalanche methods of debt repayment given the scenarios below. The snowball method encourages paying off the debt with the lowest balance first, while the avalanche method focuses first on the one with the highest interest rate.

Case 1: Steve has a bill that he owes his doctor for his broken leg, and balances on three credit cards. He has budgeted $\$ 250$ per month to repay these debts.

| Debt | Balance | Interest Rate | Minimum Monthly Payment |
| :--- | :--- | :--- | :--- |
| Bill from doctor's office | $\$ 650$ | $0.00 \%$ | $\$ 5$ |
| Credit card \#1 | $\$ 360$ | $10.99 \%$ | $\$ 25$ |
| Credit card \#2 | $\$ 5,300$ | $18.99 \%$ | $\$ 95$ |
| Credit card \#3 | $\$ 800$ | $8.99 \%$ | $\$ 25$ |


| Method | Months Until All Debt Is Paid | Months Until 1st Debt Is Paid | Interest Paid |
| :--- | :--- | :--- | :--- |
| Snowball |  |  |  |
| Avalanche |  |  |  |

Case 2: Keisha has a student loan, two credit cards with balances, and a car loan. She has budgeted $\$ 450$ per month to repay debt.

| Debt | Balance | Interest Rate | Minimum Monthly Payment |
| :--- | :--- | :--- | :--- |
| Student loan | $\$ 6,300$ | $5.6 \%$ | $\$ 75$ |
| Credit card \#1 | $\$ 4,100$ | $21.99 \%$ | $\$ 85$ |
| Credit card \#2 | $\$ 890$ | $18.99 \%$ | $\$ 25$ |
| Car loan | $\$ 8,370$ | $6.75 \%$ | $\$ 165$ |


| Method | Months Until All Debt Is Paid | Months Until 1st Debt Is Paid | Interest Paid |
| :--- | :--- | :--- | :--- |
| Snowball |  |  |  |
| Avalanche |  |  |  |

