MIDDLE SCHOOL | UNIT 4
Using Credit Wisely

Title

Interest Rates: Not Just for Consumers

LEARNING OBJECTIVES

Students will:

- **discover** that interest rates are influenced by a variety of factors.
- **research** interest rates for mortgages, savings accounts, certificates of deposit and the federal funds rate for different years.
- **draw conclusions** based on the information they compile to determine the relationship between the federal funds rate and interest rates for borrowers and savers.

Content Area

Social Studies

Grades

6–8

Overview

Why do changes in the interest rate set by the government impact you as a consumer? Students will learn how decisions made by the Federal Reserve can affect them as consumers. This activity begins with students sharing what they know about icebergs and then exploring the idiom, "tip of the iceberg." Students learn that—much like icebergs—interest rates are more complex than they appear. After watching a short video on credit, students consider factors that contribute to the interest rate people are charged on loans. They then learn that there is an even "deeper" layer—the federal funds rate set by the Federal Reserve. In pairs, students investigate the federal funds rate along with interest rates for mortgages, savings accounts, and certificates of deposit in specified years. The class then compiles a time line of rates and makes observations. In doing so, they will discover that when the federal funds rate is higher, so are the interest rates for savers and borrowers. Finally, students are asked to consider whether they would prefer a lower or higher federal funds rate and defend their responses.

Themes

Personal Finance: Credit, loans, interest rates

Social Studies: Economics, role of government, the Federal Reserve

SS: C3 Framework for Social Studies Standards

D2.Eco.10.6-8: Explain the influence of changes in interest rates on borrowing and investing.

D2.Civ.6.6-8: Describe the roles of political, civil, and economic organizations in shaping people's lives.

D2.Civ.13.6-8: Analyze the purposes, implementation, and consequences of public policies in multiple settings.

Connect

How does this connect to the student?

Students will soon be looking for jobs, buying cars, and participating in our economy. Understanding how the economy works and how interest rates are set can help them make decisions about what to do with their money.

How does this connect to careers?

Economist: Economists study the production and distribution of resources, goods, and services by collecting and analyzing data, researching trends, and evaluating economic issues. Economists work for a wide variety of companies, governments, and organizations.

How does this connect to the world?

When the U.S. Federal Reserve Board of Governors changes the federal fund rates, it can have a global impact. It can influence the value of the dollar in other countries and may prompt other central banks to adjust their rates as well.

Key Terms

Personal Finance: interest rates, prime rates, loans, borrowers, mortgage, savings account, certificate of deposit

Social Studies: Federal Reserve, federal funds rate, economy, monetary policy

Prepare

Background: Students may be familiar with the fact that money they save in a savings account at a financial institution will earn interest. But do they know that borrowers pay interest? And, do they understand the relationship between the two? Diving even deeper, they likely don't know that there is an underlying force that impacts each interest rate.

In this activity, students learn that the rates earned by savers and paid by borrowers are impacted by the **federal funds rate**. What students should know about the federal funds rate (or effective federal funds rate) is that it is the average of the interest rates that banks charge to one another to borrow money when they need it. It is influenced by what is called the target federal funds rate which is set by the Federal Reserve.

The federal funds rate[1] is the interest rate that banks and other depository financial institutions charge each other for funds that are borrowed overnight for each institution to meet its required reserve amount. In other words, if a bank has more cash on hand than it needs (called liquidity), it can lend money to another bank that needs to raise liquidity. The interest rates are determined between the two banks. The weighted average rate for all these types of negotiations is called the effective federal funds rate. The effective federal funds rate is essentially determined by the market but is influenced by the Federal Reserve through open market operations to reach the federal funds rate target. The Federal Open Market Committee (FOMC) meets eight times a year to determine the federal funds target rate. This rate influences the effective federal funds rate through open market operations or by the buying and selling of government bonds (government debt). Whether the Federal Reserve wants to buy or sell bonds depends on the state of the economy. If the FOMC believes the economy is growing too fast and inflation could occur, the Committee may set a higher federal funds rate target to temper economic activity. In the

[1]Explanation adapted from https://fred.stlouisfed.org/series/FEDFUNDS

opposite scenario, the FOMC may set a lower federal funds rate target to spur greater economic activity and avoid recession. Therefore, the FOMC must observe the current state of the economy to determine the best course of monetary policy that will maximize economic growth while adhering to the dual mandate set forth by Congress. In making its monetary policy decisions, the FOMC considers a wealth of economic data, such as: trends in prices and wages, employment, consumer spending and income, business investments, and foreign exchange markets.

The federal funds rate is the central interest rate in the U.S. financial market. It influences other interest rates such as the **prime rate**, which is the rate banks charge their customers with higher credit ratings. Additionally, the federal funds rate indirectly influences longer- term interest rates such as mortgages, loans, and savings, all of which are very important to consumer wealth and confidence. Therefore, as the federal funds rate increases, so do the rates earned by savers and paid by borrowers.

Materials

- **Computers with internet access**—students may share, if needed
- What is Credit, and How do You Use It? **Unit 4 Student Video**
- **Tip of the Iceberg Student Capture Sheet**—one per student
- **Tracking Rates Student Capture Sheet**—one per pair of students
- **Pick a Year Activity Handout**—cut into sections ahead of time to distribute
- **Chalkboard and chalk or whiteboard and markers**

Engage

- Ask students what they know about icebergs. List student responses on the board. If needed, ask questions or provide additional information for students so they understand that what a person sees above the water is only the tip of the iceberg. Most of the iceberg lies beneath the surface[2].
- Explain to students that the idiom, "tip of the iceberg," comes from this phenomenon. Often, there are situations or events that we can see a part of—the tip of the iceberg—but there is a lot more beneath the surface that we can't see.
- Challenge students to explain what might be meant by, "Your grade at the end of the year is only the tip of the iceberg." Discuss responses. Possible responses include:
    - Your grade doesn't show all the work that went into your grade.
    - There were lots of assignments, projects, tests, etc. that make up the foundation of a person's grade.
    - A student's grade is only one part of what you might know about a student—the visible part.

Teach

- Distribute a copy of **Tip of the Iceberg Capture Sheet** to each student. Direct students to label the top section (what you can see above the water) as the **interest rate**—the focus of your lesson today.
- Ask students to write a preliminary definition for interest rate based on what they know already about interest. Ask them to add it to their diagram near their label for the tip. If they are unsure, they can leave it blank.
- Tell students that they will watch a short video about credit and interest rates. Ask them to do listen for two things: what interest rates are and what factors influence interest rates.
- Play the video What is Credit, and How do You Use It?

[2]Introductory iceberg adapted from https://www.facinghistory.org/resource-library/teaching-strategies/iceberg-diagrams

- Direct students to revise their definition, as needed, and label their diagram with factors they heard in the video that might influence the interest rate a person receives on a loan. If needed, play the video a second time and allow students to continue recording or revising their labels.
- Discuss student responses. Define interest rates as the amount charged to a borrower or earned by a saver—usually expressed as a percentage of the principal. Ask students how they could restate that in their own words. When reviewing the factors that influence interest rates, be sure students eventually list the type of loan (i.e. mortgage, auto, student, credit card), the financial institution, and the person's history of paying bills on time.
- Let students know that there is an even deeper layer of the iceberg that has a big influence on interest rates.
- Explain to students that the rates banks and other financial institutions charge is strongly influenced by a rate set by the **Federal Reserve**—a government agency charged with establishing monetary policy for the United States. Let students know that this rate is something that many people don't pay attention to, but it has a big influence on the interest rates paid on loans. Similarly, it also impacts the interest rates earned by savers with money deposited in savings accounts.
- Let students know that they will be investigating different rates over time: interest rates paid on home loans (**mortgages**) by borrowers, interest rates earned by savers in traditional **savings accounts** and a 1-year **certificate of deposit** (a form of saving that requires people to leave their money in an account for a set period of time), and the rate set by the Federal Reserve called the **Fed Funds rate**.
- Divide students into pairs and distribute one copy of **Tracking Rates Student Capture Sheet** to each pair.
- Invite each pair of students to draw a year card from the **Pick a Year Activity Handout.** Direct them to write this year at the top of the right-hand column on their worksheet.
- Explain that they will look up the interest rates in the year they were assigned. Let students know that it is harder to find complete information for the earlier dates. It is okay if they can only find some data. If desired, provide the following reliable sources as starting points. If some pairs finish early and additional years remain, ask them to locate information for another year until data for all years has been found.
    - 30-year fixed-rate mortgages
        - Data from 1971–present: https://fred.stlouisfed.org/series/MORTGAGE30US
    - Savings accounts
        - Data from 2009–2016: https://fred.stlouisfed.org/series/SAVNRNJ
        - Current rates: https://www.bankrate.com/banking/savings/rates/
    - 1-Year Certificate of Deposit
        - Data from 1984–2016 https://www.bankrate.com/banking/cds/historical-cd-interest-rates-1984-2016/
        - Current rates: https://www.bankrate.com/cd.aspx
    - Fed Funds Rate
        - Data from 1954-present: https://fred.stlouisfed.org/series/FEDFUNDS
- While students complete the activity, create a time line on the board with the dates from the cards.
- Invite students to add their rates to the time line as they have them. If possible, use a different color whiteboard marker or chalk to represent the years and each rate. For example, black for the year, and red, green, and blue for mortgage, certificate of deposit, and Fed Funds, respectively.

- Challenge students to identify trends in the data. Lead students to the following observations:
    - All the rates change over time.
    - When the Federal Funds rate is high, the rates for savings and mortgage are also higher.

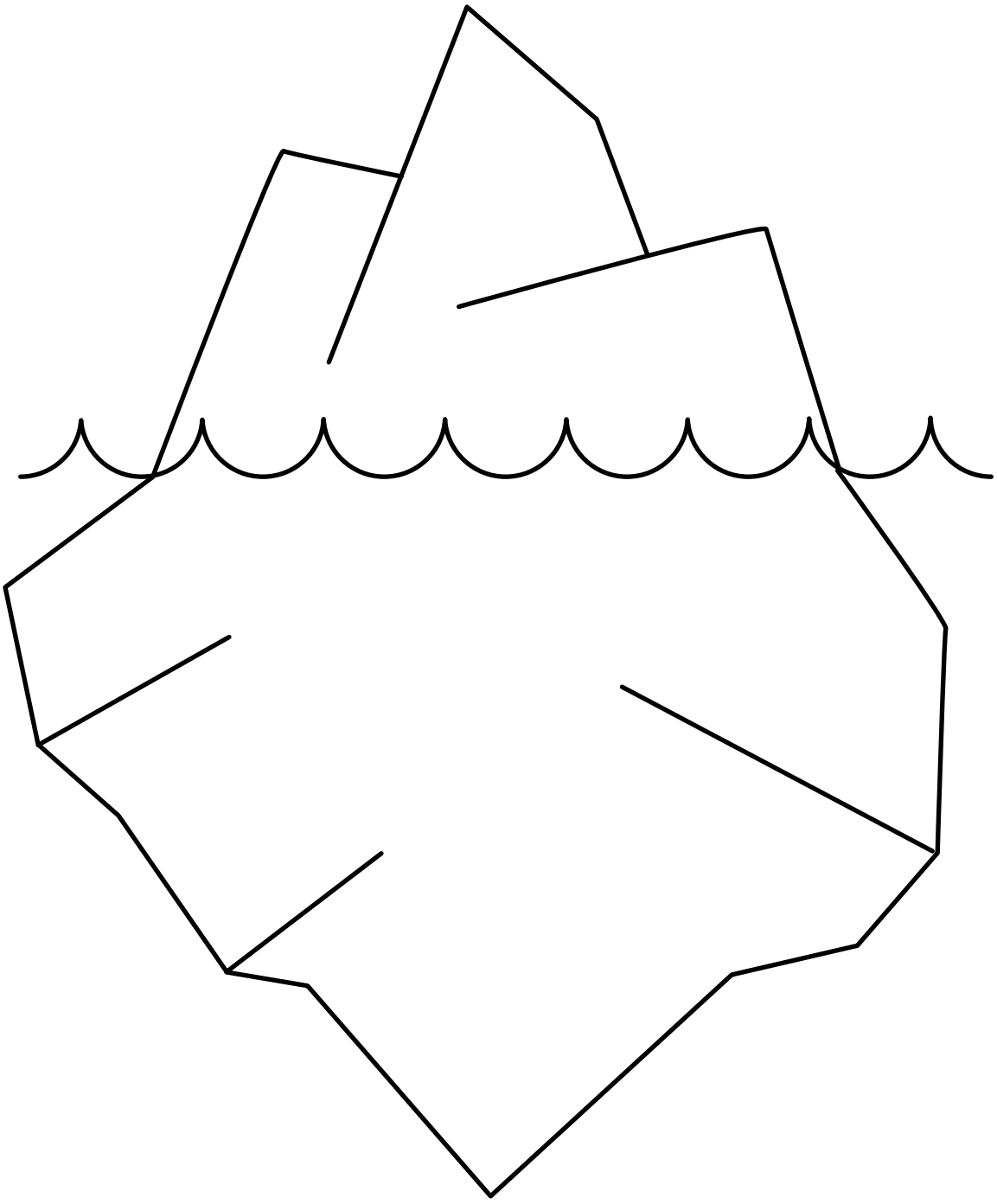
Conclude

- Invite students to raise their hands to show if they would prefer a lower or higher Federal Funds rate. Challenge students to defend their answers. Responses will vary depending on whether the student would be saving money (prefer a higher rate) or borrowing money (prefer a lower rate).
- Direct students to submit an exit ticket completing the sentence: Interest rates are like icebergs because _____.

Extend

- **Research:** Challenge students to research various periods in time as a way of explaining why interest rates were higher or lower. A starting point for research is included. Direct students to look for information describing what was going on in the economy, in society, and in the news during that time period that caused or furthered the recession and what the Federal Reserve Board did to try to control inflation.
    - 1973–1975 The Recession of 1973–1975 in the U.S.
    - 1980–1982 Recession of 1981–1982
    - 1987 Stock Market Crash of 1987
    - 2001 2001 Recession, Its Causes, Impact, and What Ended It.
    - 2008–2009 2008 Financial Crisis
- **Research:** The Federal Reserve Bank of St. Louis provides a database with economic data called FRED (short for Federal Reserve Economic Data). The site's chart of the federal funds rate also includes a parallel graph of U.S. recessions. Challenge students to research what a recession is and how the Federal Reserve tries to help curb recessions through monetary policy decisions. The Federal Reserve offers several animated videos that can also be used to explain what the Federal Reserve does and more about monetary policy.
    - In Plain English, Making Sense of the Federal Reserve (14 minutes)
    - The Fed Explains Monetary Policy (4.5 minutes)
    - The Fed Explains the Central Bank (4 minutes)
- **Game:** Allow students to play the role of the Federal Reserve and try to balance the economy through the interactive game, Chair the Fed: A Monetary Policy Game from the Federal Reserve Bank of San Francisco.

The Tip of the Iceberg



Tracking Rates

Directions: Look up the interest rates below for your assigned year.

Interest Rate	**Percent in _____ (year)**
30-Year Fixed-Rate Mortgage	
Savings Account	
1-Year Certificate of Deposit	
Federal Funds Rate	

Pick a Year

Directions: Cut into cards and distribute one or more to each pair of students until all are distributed.

1960	**1990**	**2012**
1972	**1994**	**2014**
1981	**1999**	**2016**
1984	**2004**	**2018**
1985	**2008**	**2020**
1987	**2010**	**Present**