



# Financial Forces: Understanding Taxes and Inflation

## LESSON 19: TEACHER'S GUIDE

With teens busy learning how to drive, taking finals and planning for college, concepts like taxes and inflation can seem a million miles away. In this lesson, students will learn how these financial forces will affect their lives in the future. They will explore different real-life scenarios and discover how taxes and inflation can affect income, home ownership, wealth accumulation and retirement.

**Topic:** Taxes and Inflation

**Time Required:** 60 minutes

### SUPPLIES:

- Notebooks
- Computers or tablets
- Internet access
- Student activity sheets (2)

### PREPARATION:

- Copy student activity sheets

### STUDENT ACTIVITY SHEETS:

#### ***Time Travel, Inflation Style***

Students will use an inflation calculator to discover that the value of a dollar can change over time.

#### ***Net Pay: The Effects of Taxes on Your Income***

Students will explore how taxes and inflation impact income and wealth accumulation.

### LEARNING OBJECTIVES:

#### ***Students will...***

- Explore how taxes impact financial decisions
- Analyze how inflation might affect saving for a long-term goal
- Determine how inflation can decrease buying power

### STANDARDS:

#### ***Jump\$tart Standards:***

- Financial Responsibility Standard 4

#### ***National Standards for Economics:***

- Standard 11: Money and Inflation
- Standard 16: Role of Government and Market Failure

#### ***Common Core ELA Anchor Standards:***

- Reading: Key Ideas and Details

#### ***Common Core Math Standards:***

- Number and Quantity: Quantities
- Modeling
- Statistics and Probability: Making Inferences and Justifying Conclusions

**Essential Question**

*“How do taxes and inflation affect my money?”*

**Investigate: What's It Worth?**

[Time Required: 20 minutes]

1. Begin by writing the figures \$100, \$500 and \$1,000 on the board. Divide students into small groups and assign each group one of the dollar amounts. Ask students to discuss in their groups what the amount of money means to them. Is it enough to buy a video game console or new cell phone? Do students view it as a large or small amount of money? Why?
2. Invite each group to share ideas, and ask students to keep their numbers in mind because you will revisit them later.
3. Next, introduce the concept of **inflation** and ask students to brainstorm in pairs what they know about the term. Encourage them to think about the context in which they have heard the word before. What does inflation apply to, and how would they define it?
4. Ask students to share ideas, and explain that inflation is the overall increase in prices of goods and services over time. For example, if one store increases prices for video games, but another store offers a lower price, this is not inflation. However, if all stores that carry video games increase their prices, this is considered a general increase in average prices and can be classified as inflation.
5. Next, distribute the activity sheet **Time Travel, Inflation Style** and give students 10 minutes to complete the exercise.
6. Invite volunteers to share what they learned. Why did the numbers in their tables increase and what does this mean? Explain that the value of a dollar is not static; it changes over time. For example, in 1950 a loaf of bread might have cost 15 cents, and now it may cost about \$2.50. If you had \$500 in 1950 and you have \$500 now, your **purchasing power** with the same amount of money has dramatically decreased due to inflation.

**TEACHER'S TIPS****What is the Essential Question?**

The Essential Question is designed to “hook” the learner, promote inquiry and engagement with the lesson, and allow students to exercise problem-solving abilities. It addresses a larger concept, does not have a right or wrong answer, and requires higher-order thinking skills.

**Extension Idea:**

To further illustrate the concept of inflation, compare the value of money over time using familiar items. For example, bring in or show an image of 3 movie tickets, which would have cost about 50 cents each in 1950, and an item that costs \$1.50 now, such as a vending machine soda. Help students understand that you can only purchase a soda now with the amount of money it used to cost to purchase three movie tickets.

### Student Preparation: How Does Inflation Affect Me?

[Time Required: 15 minutes]

7. Next, ask students to think about how inflation will affect their own lives. What does it mean that any money they have now will have less purchasing power in the future? How will inflation affect their spending or saving choices?
8. Explain that inflation may affect students sooner than they think. While we can't predict exactly how much inflation will rise in the future, historically the rate has increased by 2-3% each year. Ask students to pretend that they have received \$1,000 as a gift to use for expenses when they go to college. Assuming a 3% yearly inflation rate, what will that gift be worth in today's dollars five years from now? Challenge students to calculate the amount in their notebooks.
9. Next, divide students into groups of four or five and ask them to discuss their results. What is the impact of inflation on the gift, even in the short term? (Answer: The gift will be worth \$858.73 in today's dollars.) Were the numbers a surprise? Why or why not?
10. Invite volunteers from each group to share their findings with the class. How does inflation influence savings and wealth accumulation? Will students make different spending or savings choices based on what they now know about inflation?

### Challenge: Taxes Take a Toll

[Time Required: 20 minutes]

11. Ask students what other factors have an impact on money besides inflation. Can they think of any other "financial forces" that may affect wealth potential? Introduce the concept of **taxes** to the class and ask students to raise their hands if they have ever paid taxes before. Explain that even though students might not have paid **income tax**; if they live within one of many U.S. states and have purchased a book, shoes or other item in a store, they have probably paid **sales tax**.



#### TEACHER'S TIP

##### Extra Help:

If students need it, provide them with the following formula:

The future value of the gift in today's dollars = current value x (1 - inflation rate)<sup>years</sup>

12. Explain that income tax is a certain percentage of your income that is paid to federal and some state governments. The exact percentage is based on how much money you make. Sales tax is an additional charge on the items you buy that is paid to your state or local government, however not all states have sales tax. Other common taxes include **property tax** (taxes paid on your home), **Social Security** and **Medicare** (taxes taken out of your paycheck to fund government retirement and health care programs, respectively). Most taxes are used to invest money back into federal, state and local government efforts. For example, taxes help to pay for road repairs, education and police forces.
13. Ask students how they think taxes will affect their own lives. How will knowing that a certain portion of their income goes to taxes affect spending, saving and career choices?
14. Explain that students will now calculate ways that taxes can impact their incomes. Distribute the activity sheet **Net Pay: The Effects of Taxes on Your Income** and give students ten minutes to complete the activity.
15. Invite students to share their responses, and initiate a discussion on how taxes and inflation can affect finances. What do students see as some of the positive or negative affects of taxes? How will inflation affect students' buying power in the future?

### Reflection

[Time Required: 5 minutes]

Ask students to reflect in their notebooks about why it's important to be aware of financial forces, such as inflation and taxes, and how these forces could impact their futures.



### TEACHER'S TIP

#### What is Reflection?

The Reflection part of the class gives students the opportunity to reflect on the bigger-picture meaning of the exercise, and to assimilate and personalize some of the concepts and ideas learned about in the class.





# Time Travel, Inflation Style

## LESSON 19: ANSWER KEY 1

Note: For the Buying Power Today column, the teacher should look up the numbers for the current year.

### \$100

Year	Starting Value	Buying Power in 1990	Buying Power in 2000	Buying Power Today
1920	\$100	\$660.10	\$874.61	Varies
1930	\$100	\$745.03	\$987.13	Varies
1940	\$100	\$916.55	\$1,214.39	Varies
1950	\$100	\$542.13	\$718.30	Varies
1960	\$100	\$434.81	\$576.11	Varies
1970	\$100	\$337.04	\$446.56	Varies
1980	\$100	\$163.75	\$216.97	Varies

### \$500

Year	Starting Value	Buying Power in 1990	Buying Power in 2000	Buying Power Today
1920	\$500	\$3,300.52	\$4,373.06	Varies
1930	\$500	\$3,725.15	\$4,935.67	Varies
1940	\$500	\$4,582.73	\$6,071.94	Varies
1950	\$500	\$2,710.64	\$3,591.49	Varies
1960	\$500	\$2,174.06	\$2,880.55	Varies
1970	\$500	\$1,685.19	\$2,232.80	Varies
1980	\$500	\$818.77	\$1,084.83	Varies

### \$1,000

Year	Starting Value	Buying Power in 1990	Buying Power in 2000	Buying Power Today
1920	\$1,000	\$6,601.04	\$8,746.11	Varies
1930	\$1,000	\$7,450.29	\$9,871.35	Varies
1940	\$1,000	\$9,165.47	\$12,143.88	Varies
1950	\$1,000	\$5,421.28	\$7,182.98	Varies
1960	\$1,000	\$4,348.12	\$5,761.09	Varies
1970	\$1,000	\$3,370.37	\$4,465.61	Varies
1980	\$1,000	\$1,637.53	\$2,169.67	Varies



# Net Pay: The Effects of Taxes on Your Income

## LESSON 19: ANSWER KEY 2

A. Courtney pays \$150 in federal taxes every paycheck, \$40 in state taxes, and \$60 in Social Security and Medicare taxes.

B. Courtney's net pay is: \$750 per paycheck.

C. Answers will vary. Courtney's taxes may be used to finance various federal and state government programs, including road repairs, education and the police force. Her contributions to Social Security will be used to fund the federal government retirement program. Her contributions to Medicare will be used to fund the federal healthcare program.