

## The Impact of Inflation

### LESSON DESCRIPTION (Background for the Instructor)

In this lesson, students will learn what inflation is and how it impacts financial decisions (e.g., the selection of investments) and lifestyles (e.g., a person's standard of living today and in the future). Students will learn how to calculate past and future costs of goods and services, how inflation impacts different groups of people (e.g., savers and retirees), and how U.S. inflation rates have changed during the past 100 years.

The lesson includes five activities that instructors can select from. In these activities, students will:

- ◆ View and debrief two YouTube videos about inflation: *Explaining Inflation* (which describes the impact of inflation on prices) and *What is Inflation?* (which explains how inflation impacts investing)
- ◆ Conduct a *Web Quest* to learn about historical inflation rates in the United States
- ◆ Complete past and future price inflation math problems using an online calculator
- ◆ Prepare a story or skit with a character of someone as a \$100 bill describing their past and future value
- ◆ Complete a *Winners and Losers* activity to analyze who benefits from and is hurt by inflation and why

The lesson also contains 10 assessment questions (5 multiple choice and 5 True-False), learning extensions (i.e., suggested learning activities beyond the scope of the lesson plan), and references and resources.

### INTRODUCTION (Background for the Instructor)

Inflation is an increase in the price of goods and services. Over time, inflation reduces the purchasing power of a dollar, thereby lowering its value. Inflation causes losses for both consumers and the overall economy. For example, if the price of gasoline rises, drivers must pay more to fill their tanks and they have less money available for discretionary spending (e.g., eating out and buying clothing). When the inflation rate increases faster than people's income from wages or other sources (e.g., Social Security), their purchasing power declines. Inflation is generally caused by two main factors:

1. Increased demand for products and services such that consumer demand exceeds available supply
2. Increased costs of production (e.g., raw materials and labor) caused by events such as crop losses

Inflation impacts people in different ways. Those who *benefit from inflation*, or at least are not negatively impacted, include holders of low-interest fixed-rate loans such as mortgages (because their interest rates don't increase) and investors in commodities, such as gold, which are purchased as a hedge against inflation (because commodity prices generally track inflation rates).

Those who lose with inflation include the American economy (because consumers' purchasing power declines, along with their standard of living), borrowers (because lenders raise interest rates to match market interest rates and hedge future inflation), savers (because inflation erodes the value of earnings on savings accounts), and retirees (because they live on fixed incomes that don't increase to match inflation).

The rate of inflation (i.e., the extent of its impact upon prices) is measured by the Consumer Price Index or CPI, which measures changes in prices paid by urban consumers for a representative collection of commonly purchased products and services. Some experts believe the CPI does not accurately reflect the cost of living for all U.S. families. Nonetheless, it is the most widely used barometer of inflation. For example, the CPI is used for annual cost of living adjustments (COLAs) for Social Security benefits. Some investors use the CPI as a benchmark for their investments to outpace by a certain percentage.

*Inflation risk* is very common with cash equivalent assets such as savings accounts, money market funds, and certificates of deposit (CDs). The two enemies of anyone trying to accumulate money for future financial goals are inflation and taxes. With extremely low interest rates, the after-tax return on cash assets is likely to be lower than the rate of inflation, resulting in a loss of purchasing power.

According to data compiled by Ibbotson Associates, an investment research firm, between 1926 and 2014, the compound annual return on various types of investments was as follows: 12.2% for small company stocks, 10.1% for large company stocks, 5.7% for government bonds, and 3.5% for Treasury bills. The inflation rate during this period averaged 2.9%. People with money in cash assets barely would have kept up with inflation and probably had a negative return after subtracting both income taxes and inflation.

A simple formula to use to determine the investment return needed to break even (read: not lose purchasing power) after taxes and inflation is to divide an assumed inflation rate by 100 minus your marginal tax bracket. The overall return on all of your savings and investments combined must exceed the result of this calculation for your money to grow. Otherwise, your savings will lose purchasing power over time.

Here's an example. If 3% inflation is assumed and you are in the 15% tax bracket, the overall rate of return on all savings and investment accounts needed to break even after taxes and inflation is 3.5% ( $3 \div 100 - .15$  or  $3 \div .85$ ). In the 25% tax bracket, the break-even rate with 3% inflation is 4% ( $3 \div 100 - .25$  or  $3 \div .75$ ). For a list of current federal marginal tax brackets, see <http://njaes.rutgers.edu/money/taxinfo/>.

If a more conservative 4% inflation assumption is used in the formula, the break-even rates for investors in the 15% and 25% marginal tax brackets are 4.7% ( $4 \div .85$ ) and 5.3% ( $4 \div .75$ ), respectively. Anything less the break-even rate of return means that an investor is going backwards as after-tax returns lag inflation.

It's important to note that not every financial asset that someone owns has to earn more than the break-even rate. Rather, it is their combined weighted average that counts. The moral of the story is that investments will generally move you closer to your financial goals at a faster pace than cash (savings) accounts. History tells us that investing, especially over long time frames in a diversified portfolio that includes stocks and growth mutual funds, is a proven way to hedge inflation. Investments provide the best chance of exceeding the break-even rate, which is necessary to build wealth and maintain purchasing power. It is important to plan for the effects of taxes and inflation and earn enough on your combined investments to offset them.

The opposite of inflation is deflation, which is a decrease in most prices. Deflation occurs when the inflation rate is a negative number below 0%. Like inflation, deflation can also have negative effects on individuals and the economy. Typically, there is less demand for goods and services, reduced spending, and increased unemployment, which can lead to a recession or, worse, an economic depression.

## OBJECTIVES

Students will be able to:

- ◆ Describe what inflation is and how it affects people positively (winners) and negatively (losers).
- ◆ Define the Consumer Price Index (CPI) and use a CPI calculator to compare prices of items over time.
- ◆ Explain the break-even rate on investments; i.e., the return that is required to hedge inflation and taxes.
- ◆ Describe how U.S. inflation rates have changed during the past 100 years.

## NEW JERSEY PERSONAL FINANCIAL LITERACY STANDARD

- ◆ Standard 9.1.12.D2: Assess the impact of inflation on economic decisions and lifestyles.  
See <http://www.state.nj.us/education/aps/cccs/career/FLFAQ.htm#gradcredit> and <http://www.state.nj.us/education/cccs/2014/career/91.pdf> for information about Standard 9.1

## TIME REQUIRED

45 to 180 minutes (depending upon student progress and content depth and number of activities used)

## MATERIALS

- ◆ YouTube Video: *Explaining Inflation*: [https://www.youtube.com/watch?v=WKZvm\\_fqYRM](https://www.youtube.com/watch?v=WKZvm_fqYRM)
- ◆ YouTube Video: *What is Inflation?*: <https://www.youtube.com/watch?v=XwhFAuBSI9g>
- ◆ *Inflation Web Quest* handout (historical inflation rates)
- ◆ *Inflation Calculator Activity* handout and CPI Inflation Calculator: <http://data.bls.gov/cgi-bin/cpicalc.pl>
- ◆ *If Benjamins Could Talk Activity* handout (can be done as individual story-telling or group skits)
- ◆ *Inflation Winners and Losers Activity* handout
- ◆ *Inflation Quiz* (ASSESSMENT)

*Teachers are encouraged to use as many of the student learning activities as time permits to provide a fuller understanding of inflation. The activities can also be used for extra credit assignments, homework, or after-school activities.*

## PROCEDURE

1. As an introductory activity, ask students to answer this question (one of five financial knowledge questions) from the FINRA (Financial Industry Regulatory Authority) Investor Education Foundation National Financial Capability Study (NFCS) Quiz (link to see the entire quiz: <http://www.usfinancialcapability.org/quiz.php>):

Imagine that the interest rate on your savings account is 1 percent a year and inflation is 2 percent a year. After 1 year, would the money in the account buy more than it does today, exactly the same, or less than today?

- a. More
- b. Same
- c. Less
- d. Don't Know

*Answers may vary but the correct answer is "c" (less) because the inflation rate (2%) is greater than the return on savings (1%), which means that the saver has lost purchasing power due to inflation.*

Then ask students to explain what inflation is. Provide a hint by indicating that saving money is like taking a step forward from Point A (where you are now financially) to Point B (where you want to be) while inflation is like taking a step backward. Demonstrate this by walking forward and then backward.

*Answers will vary, but the two key points for students to realize is that inflation increases the price of goods and services and erodes the interest earned on savings and investments, especially low-interest accounts.*

2. **Activity 1:** Show the video *Explaining Inflation* and ask students to explain key take-aways:  
[https://www.youtube.com/watch?v=WKZvm\\_fqYRM](https://www.youtube.com/watch?v=WKZvm_fqYRM) (1:26)

*Answers will vary and may include the fact that the overall cost of goods and services increases and the purchasing power (value) of a dollar decreases with inflation. Also, that inflation increases when the demand for products and services in the economy exceeds the supply and that prices for products were much lower decades ago (references were made to a five cent hamburger and a \$1,000 Corvette).*

Then show the video *What is Inflation (Any Why is it Bad?)* and ask students to explain key take-aways: <https://www.youtube.com/watch?v=XwhFAuBSI9g> (2:37)

*In addition to responses noted above, students might mention that investing can help investors hedge inflation because the rate of return on investments, such as stocks and stock mutual funds, has historically exceeded (outpaced) the inflation rate, which helps investors maintain purchasing power and build wealth.*

3. Share the information in the *Introduction* pertaining to causes of inflation, the impacts of inflation on consumers and the economy, the Consumer Price Index (CPI), inflation risk for investments, the break-even rate on investments to outpace inflation, diversification, and deflation.
4. **Activity 2:** Distribute the *Inflation Web Quest* handout and ask students to explore the history of the Consumer Price Index (CPI) to measure the U.S. inflation rate during the past 100 years using the web sites <http://www.usinflationcalculator.com/inflation/historical-inflation-rates/> (CPI only) and [http://inflationdata.com/Inflation/Inflation\\_Rate/HistoricalInflation.aspx](http://inflationdata.com/Inflation/Inflation_Rate/HistoricalInflation.aspx) (CPI and history).

*Answers will vary. Some students might point out years with very high inflation rates (e.g., 1917-1920, 1979-1981), or recent low inflation rates (2010-2014), or the negative inflation rates in certain years (e.g., 1932 and 2009). Ask students to discuss inflation rates in the context of historical events that occurred.*

5. **Activity 3: Inflation Calculator Activity:** Distribute the handout and ask students to complete the worksheet using information obtained from the U.S. Bureau of Labor Statistics *CPI Inflation Calculator*: <http://data.bls.gov/cgi-bin/cpicalc.pl>. Explain that median income is the exact halfway point with half of American households earning an amount above that number and half below. Also explain that changes in median incomes and the cost of Corvettes and homes don't exactly match the CPI rate, but it is still a useful estimate for comparing incomes and expenses over time. Then debrief the activity by explaining how incomes and price increases have closely tracked each other.

Answers to the questions on the worksheet, derived from the online calculator, are as follows:

**U.S. Median Household Income: \$52,250 in 2013** (Source: <http://www.deptofnumbers.com/income/us/>)

**1995:** \$34,182

**1975:** \$12,067

**1950:** \$5,405

**1930:** \$3,746

**Cost of Chevrolet Corvette Stingray in 2015: \$55,000**

(Source: <http://www.chevrolet.com/corvette-stingray.html>)

**1995:** \$35,124

**1975:** \$12,400

**1953:** \$6,154 (**Note:** 1953 was the first year that Chevrolet Corvettes were built on an assembly line in Flint, Michigan: <http://www.history.com/this-day-in-history/first-corvette-built>)

**Median Sale Price of a Home in the U.S. in May 2015: \$215,177 (\$273,590 in New Jersey)**

(Source: <http://www.zillow.com/home-values/> and <http://www.zillow.com/nj/home-values/>)

**1995:** \$137,417 (U.S.)      \$174,721 (NJ)

**1975:** \$48,511 (U.S.)      \$61,680 (NJ)

**1950:** \$21,731 (U.S.)      \$27,630 (NJ)

**1930:** \$15,058 (U.S.)      \$19,146 (NJ)

*During the debriefing, students might note that they wished they could earn today's median income and pay yesterday's prices. Of course, that is impossible. They might also note relationships between the three calculations such as the fact that the cost of a Corvette exceeds median income both today and in 1970 and the 1950s. Also, a Corvette car today costs about twice the cost of a New Jersey home back in 1950.*

6. **Activity 4: If Benjamins Could Talk Activity:** Distribute the handout and explain that \$100 bills are sometimes called "Benjamins" because they contain the face of Benjamin Franklin, one of the founders of the United States. Then ask the students to pretend that they are a "Benjamin" (i.e., a talking \$100 bill) and write a story about their past, current, and future purchasing power, using online resources such as the online CPI calculator [http://www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm).

The handout provides space for students to write out their story. When they are done, ask for volunteer "Benjamins" to read what they wrote. This activity could also be adapted as a group activity with a skit about inflation that involves a \$100 bill character and other speaking parts. Encourage students to be creative with props, costumes, graphic designs, etc.

7. **Activity 5: Inflation Winners and Losers Activity:** Distribute the handout and ask students to use an online search engine (e.g., Google, Bing) and search for “Inflation Winners and Losers,” read three articles, and complete the worksheet to identify those who benefit and suffer from rising inflation rates and why. Below are some examples of information that students will find:

**Winners:**

- ◆ Holders of “hard” assets such as gold. While investments such as these are speculative, and come with no guarantees of making a profit, people who fear high inflation sometimes buy them as an inflation hedge and to avoid having inflation “eat away” the value of their cash assets.
- ◆ People who own real estate. Typically the value of real property increases with inflation rates, although changes in the value of homes, etc. are greatly influenced by geographic location.

**Losers:**

- ◆ Investors in long-term bonds. Inflation will severely erode the face value of a bond when it matures (e.g. \$1,000 bond in 1985 has \$2,210 of purchasing power in 2015 according to: <http://data.bls.gov/cgi-bin/cpicalc.pl?cost1=1%2C000&year1=1985&year2=2015>).
- ◆ Variable rate loan and credit card holders because they will experience higher future payments. An example is when monthly mortgage payments rise on adjustable-rate mortgages.

*Students’ discussion will vary, depending on the articles that they read, but a key take-away is that they realize that people who have assets that increase in value benefit from inflation. Conversely, those with assets that decrease in value or those with higher loan payments are negatively impacted by inflation.*

## CLOSURE

Ask students if they have any remaining questions about inflation. Then ask them to recall something that they purchased within the past three years that later increased in price. Note that inflation can be expected or unexpected. Expected inflation is steady and predictable, such as the 3% average inflation rate in the U.S. or an expected rent increase when the lease on an apartment ends. Unexpected inflation is problematic because people aren’t prepared for it. An example is a sharp and fast increase in gasoline prices.

## GLOSSARY

**Break-Even Investment Return-** The weighted average return on all of a person’s combined investments that is required to outpace the negative effects of income taxes and inflation. The break-even return is calculated with a formula based upon an investor’s assumed inflation rate and marginal tax rate. The higher the inflation rate that someone assumes in the formula, the higher their break-even rate, which will generally require a higher investment in stocks that have the potential to outpace inflation over time.

**Consumer Price Index-** Published monthly by the U.S. Bureau of Labor Statistics, the Consumer Price Index (CPI) provides a broad measure of the cost of living for consumers. The index represents a statistical average of prices for certain products and services expressed as a percentage of a base period. It shows whether prices for items, such as food, housing, clothing, and transportation have risen or fallen since the last comparison period. For a list of items found in the CPI, see [http://www.bls.gov/dolfaq/bls\\_ques3.htm](http://www.bls.gov/dolfaq/bls_ques3.htm).

**Deflation-** A decrease in the general level of prices in the economy. When consumers expect prices to fall, they often cut their spending in anticipation of further price cuts. Reduced consumer spending during deflationary periods generally has negative effects on the economy (e.g., high unemployment, recession).

**Inflation-** An increase in the general level of prices in the economy. As inflation rates rise (e.g., from a rate of 2% to 3%), the purchasing power of a dollar decreases. For example, if prices increased by a 3% rate of inflation during the past year, something that cost \$100 last year would cost \$103 today. When inflation rates rise, consumers need to spend more than they spent last year to buy the same products and services. Inflation is caused by an increase in the money supply without a proportionate increase in the amount of items that are available for purchase by consumers, leading to scarcity, competition, and price increases.

**Inflation Risk-** Inflation risk occurs when the after-tax return on an investment fails to keep pace with the rate of inflation and an investor loses purchasing power as a result. *Inflation risk* is very common with cash equivalent assets. Especially today with extremely low interest rates, the after-tax return on certificates of deposit (CDs) and money market funds is likely to be lower than the rate of inflation.

**Marginal Tax Rate-** The tax rate paid on the last (highest) dollar of personal or (if married) household earnings. Current (2015) federal marginal tax rates range from 10% to 39.6%.

**Median-** The midpoint (middle) in a distribution of numbers that is sorted in numerical order from the lowest number to the highest. Personal finance examples where median numbers are used include amounts of income or wealth (i.e., household net worth) and costs for products and services.

**Purchasing Power-** The ability to buy goods and services with available income derived from earnings and/or the return on investments.

**Real Rate of Return-** The return that is realized on an investment after adjusting for the effects of inflation. It is calculated by subtracting the inflation rate from the nominal rate (i.e., the actual return on an investment). For example, if a bond pays 6% interest (nominal rate) and the inflation rate was 3% during the past year, the real rate of return was only 3%, which is the actual amount of increased savings value.

**Supply and Demand-** A fundamental economic concept that compares how much of something is available (supply) with how much people want it (demand). When demand exceeds supply, prices rise as consumers have to compete with one another. Conversely, when supply exceeds demand, prices decrease.

## LEARNING EXTENSIONS

If time permits, the following activities can be used to extend the depth of this lesson:

- ◆ Include material from the Council for Economic Education econedlink lesson *What Causes Inflation?*: <http://www.econedlink.org/lessons/index.php?lid=615&type=afterschool>
- ◆ Assign the *Inflation Introduction* math problems as a homework assignment or in-class assignment: <https://corporate.troweprice.com/Money-Confident-Kids/Site/Educators/Teaching-Tools-And-Activities/Details/Inflation-Introduction>. The answer key for the 10 math problems is available at <https://corporate.troweprice.com/Money-Confident-Kids/files/lesson-plan-inflation-introduction.pdf>.

- ◆ Include material from the *Inflation: A Chain Reaction* Econ-Exchange lesson plan: <http://www.powellinfo.org/uploads/econexchange/uploads/Spring04/Inflation.pdf>
- ◆ Have students write down five things that they want to buy today and research their cost today online. Then ask them to determine the cost of these items ten years into the future using this future value of money calculator with 10 time periods and a 3% inflation rate (interest rate per time period): <http://www.investopedia.com/calculator/fvcal.aspx> For example, something that costs \$10,000 today (present value) would cost \$13,439 in ten years (number of time periods) with a 3% annual inflation rate. [**Note:** Do NOT use a comma in the present value dollar amount before you press the “Calculate” button or you will get an error message]. Debrief the activity.
- ◆ Have students write an article about inflation for the school newspaper or a class blog. They might include results from their math calculations about the price of goods and services today and in the past and/or future and interviews with their parents or grandparents about prices when they were young.
- ◆ Have students write a short essay about how inflation has impacted (or will impact) their lives personally. For example, the cost of college has been increasing while their parents may be trying to set aside college savings. This could result in a shortfall that will require them to take out student loans.
- ◆ Show and debrief key take-aways from the animated YouTube video *Inflation Explained in 2 Minutes*: <https://www.youtube.com/watch?v=-pwincsv4E0>. For more advanced students, recommend the Khan Academy video *Introduction to Inflation* (7:31): <https://www.youtube.com/watch?v=AaR1mPrdbTc>.

### **ASSESSMENT:** *Inflation Quiz*

Instructors are encouraged to use the questions below for content review or as a pre-and/or post-test to determine gains in student knowledge about inflation after teaching this lesson.

Correct answers to the multiple choice and True-False questions are shown in boldface type.

#### **Multiple Choice Questions**

1. To calculate the future cost of a product or service due to inflation, people need to know everything except the
  - a. Inflation rate (e.g., 3%)
  - b. Current cost of product or service
  - c. Type of product or service**
  - d. Future purchase date
2. An increase in the general level of prices for goods and services in the economy that causes changes in consumer buying power is referred to as \_\_\_\_\_ risk.
  - a. Interest-rate
  - b. Inflation**
  - c. Market
  - d. Economic



3. Who is hurt *most* by inflation?
  - a. **Homeowners with adjustable-rate mortgages**
  - b. Homeowners with fixed-rate mortgages
  - c. People who own real estate
  - d. People who buy precious metals such as gold
  
4. To determine how long it takes for prices to double, divide an assumed inflation rate into 72. This is called the Rule of 72. If a 4% inflation rate is expected, how long will it take for prices to double?
  - a. 12 years
  - b. 16 years
  - c. **18 years**
  - d. 24 years
  
5. Deflation is generally not considered desirable because
  - a. **It has historically been associated with severe economic downturns**
  - b. People rush to buy things and increase their spending levels
  - c. The general level of prices in the economy increases
  - d. The general level of prices in the economy decreases

### True-False Questions

1. Everyone loses money when the U.S. inflation rate increases. (**FALSE: Like many events that happen in life, there are winners and losers. Those who benefit from, or at least are not hurt by, inflation include borrowers with fixed-rate loans and investors in real estate and precious metals**)
  
2. The U.S. inflation rate is measured by the Consumer Price Index or CPI. (**TRUE: The CPI is reported monthly by the U.S. Bureau of Labor Statistics and measures changes in the prices paid by urban consumers for a representative collection of goods and services**)
  
3. U.S. inflation rates have been in the double digits (i.e., 10% or higher) in the past. (**TRUE: Both the 1910s and 1970s decades had large (high) annual inflation rates. The highest annual rate of inflation in the U.S. in the 20<sup>th</sup> century was during the energy crisis and economic downturn on the 1970s. See <http://inflationdata.com/Inflation/Inflation/DecadeInflation.asp> for additional details**)
  
4. The longest period of deflation (i.e., negative inflation) in the U.S. in the 20<sup>th</sup> century was during the Great Depression years of the 1930s. (**TRUE: The U.S. inflation rate was negative during the decade between 1930 and 1939. Consumer spending decreased and unemployment was high. See <http://inflationdata.com/Inflation/Inflation/DecadeInflation.asp> for additional details**)
  
5. One of the causes of inflation is low demand for products and services. (**FALSE: Inflation is caused by an availability of money, a limited supply of products and services, and high consumer demand**)

### REFERENCES AND RESOURCES

*Average Annual Inflation Rates by Decade* (InflationData.com):  
<http://inflationdata.com/Inflation/Inflation/DecadeInflation.asp>

*CPI Inflation Calculator* (U.S. Bureau of Labor Statistics): <http://data.bls.gov/cgi-bin/cpicalc.pl>.

*Current U.S. Inflation Rates: 2005-2015* (U.S. Inflation calculator): <http://www.usinflationcalculator.com/inflation/current-inflation-rates/>.

*Future Value Calculator* (Investopedia): <http://www.investopedia.com/calculator/fvcal.aspx>

*Historical Inflation Rate* (InflationData.com): [http://inflationdata.com/Inflation/Inflation\\_Rate/HistoricalInflation.aspx](http://inflationdata.com/Inflation/Inflation_Rate/HistoricalInflation.aspx)

*Historical Inflation Rates: 1914-2015* (U.S. Inflation Calculator): <http://www.usinflationcalculator.com/inflation/historical-inflation-rates/>.

*U.S. Historical Experience with Deflation* (Federal Reserve Bank of St. Louis, 2010): [https://research.stlouisfed.org/publications/net/20101001/cover.pdf?utm\\_source=Twitter&utm\\_medium=Social%2BMedia&utm\\_campaign=Twitter](https://research.stlouisfed.org/publications/net/20101001/cover.pdf?utm_source=Twitter&utm_medium=Social%2BMedia&utm_campaign=Twitter)

*Inflation* (Business Dictionary): <http://www.businessdictionary.com/definition/inflation.html>

*Inflation* (Investopedia): <http://www.investopedia.com/terms/i/inflation.asp>

*Inflation: A Chain Reaction* (Econ-Exchange): <http://www.powellinfo.org/uploads/econexchange/uploads/Spring04/Inflation.pdf>

*Inflation Calculator* (Dollar Times): <http://www.dollartimes.com/inflation/inflation.php?amount=50000&year=1926>

*Inflation Introduction* (T. Rowe Price): <https://corporate.troweprice.com/Money-Confident-Kids/files/lesson-plan-inflation-introduction.pdf>

*Investing to Stay Ahead of Taxes and Inflation* (eXtension): <http://www.extension.org/pages/70224/monthly-investment-message:-december-2013#.VakXAU3bKM8>

*Investment Return* (eXtension): <http://www.extension.org/pages/12459/investment-return#.VakXgU3bKM8>

*Lessons for Inflation* (Lesson Corner): [http://www.lessoncorner.com/Social\\_Studies/Economics/Inflation](http://www.lessoncorner.com/Social_Studies/Economics/Inflation)

*Rule of 72* (eXtension): <http://www.extension.org/pages/12708/rule-of-72#.VakYE03bKM8>

*The Rule of 72* (Better Explained): <http://betterexplained.com/articles/the-rule-of-72/>

*U.S. Inflation Rate by Year* (U.S. Bureau of Labor Statistics data): <http://www.multpl.com/inflation/table>

*U.S. Inflation Rate: History by Year and Forecast* (About.com): <http://useconomy.about.com/od/inflationfaq/a/US-Inflation-Rate.htm>

*What Causes Inflation?* (Council for Economic Education): <http://www.econedlink.org/lessons/index.php?lid=615&type=afterschool>

*What is Inflation risk in Investing?* (eXtension): <http://www.extension.org/pages/38839/what-is-inflation-risk-in-investing#.VakXQk3bKM8>

*Winners and Losers if Inflation Skyrockets* (Bankrate): <http://www.bankrate.com/finance/investing/winners-and-losers-if-inflation-skyrockets-1.aspx>

# Web Quest: Inflation Web Quest

The best way to truly understand something is to understand its history. With this activity, you will visit web sites to research historical U.S. inflation rates and how they have changed over time.

## Instructions:

1. Go to an online search engine (e.g., Google, Bing) and search for “U.S. inflation rate history ”
2. Read three articles (not paid advertisements) that describe how inflation rates have changed over time.
3. When you are done reading, complete the table below by describing three key pieces of information that you found and the name of the online information source.
4. Be prepared to discuss the information that you found with the entire class.

Information Source	Information About U.S. Inflation Rate History

# Inflation Calculator Activity

Inflation increases the cost of products and services over time. With this activity you will compare today's value of three items (2013 median U.S. income, the 2015 price of a Chevrolet Corvette, and 2015 median sale price of a home in the U.S.) with an approximation of their previous values, assuming a 3% rate of inflation.

Follow the steps below to calculate the previous value of these three items.

**Step 1:** (CPI Inflation Calculator): <http://data.bls.gov/cgi-bin/cpicalc.pl>

**Step 2:** Enter the current value of each item (median incomes, Corvettes, homes) in the first open field

**Step 3:** Enter the year that each item was most recently valued (e.g., 2015) in the second open field

**Step 4:** Enter the previous date found in each table row, below, in the third open field and press calculate

**Step 5:** Write the down the rounded off previous values of the three items in the spaces below

**Step 6:** Write a one-paragraph summary describing what you learned from this activity:

**U.S. Median Household Income**

2013	\$52,250
1995	
1975	
1950	
1930	

**Chevrolet Corvette Stingray**

2015	\$55,000
1995	
1975	
1953	

**Median Sale Price of a U.S. Home and a New Jersey Home**

2015 (U.S.)	\$215,177	2015 (NJ)	\$273,590
1995		1995	
1975		1975	
1950		1950	
1930		1930	

# If Benjamins Could Talk Activity



Pretend that you are a \$100 bill named “Benjamin.” Write a story about your past, present, and future value and what you can or could buy in various time periods. Use these online calculators to help you:

<http://data.bls.gov/cgi-bin/cpicalc.pl> (to determine past and future dollar values based upon the CPI)

<http://www.moneychimp.com/features/rule72.htm> (to determine inflation losses using the Rule of 72)

<http://www.investopedia.com/calculator/fvcal.aspx> (to determine the future value of \$100)

# Inflation Winners and Losers Activity

Inflation, like many things in life, affects people in different ways. Some people benefit from inflation, or at least experience few negative financial impacts (winners), while others experience financial losses (losers).

## Instructions:

1. Go to an online search engine (e.g., Google, Bing) and search for “inflation winners and losers ”
2. Read three articles (not paid advertisements) that describe how people are impacted by inflation.
3. When you are done reading, complete the table below by describing three examples of inflation winners and losers and how they are positively or negatively impacted by inflation.
4. Be prepared to discuss the information that you found with the entire class.

	Description	Rationale
<b>Inflation Winner #1</b>		
<b>Inflation Winner #2</b>		
<b>Inflation Winner #3</b>		

	Description	Rationale
<b>Inflation Loser #1</b>		
<b>Inflation Loser #2</b>		
<b>Inflation Loser #3</b>		

# *Inflation Quiz*

## **Multiple Choice Questions:**

**Circle the correct answer from among the four answers provided.**

1. To calculate the future cost of a product or service, people need to know everything except the
  - a. Inflation rate (e.g., 3%)
  - b. Current cost of product or service
  - c. Type of product or service
  - d. Future purchase date
2. An increase in the general level of prices for goods and services in the economy that causes changes in consumer buying power is referred to as \_\_\_\_\_ risk.
  - a. Interest-rate
  - b. Inflation
  - c. Market
  - d. Economic
3. Who is hurt *most* by inflation?
  - a. Homeowners with adjustable-rate mortgages
  - b. Homeowners with fixed-rate mortgages
  - c. People who own real estate
  - d. People who buy precious metals such as gold
4. To determine how long it takes for prices to double, divide an assumed inflation rate into 72. This is called the Rule of 72. If a 4% inflation rate is expected, how long will it take for prices to double?
  - a. 12 years
  - b. 16 years
  - c. 18 years
  - d. 24 years
5. Deflation is generally not considered desirable because
  - a. It has historically been associated with severe economic downturns
  - b. People rush to buy things and increase their spending levels
  - c. The general level of prices in the economy increases
  - d. The general level of prices in the economy decreases

## **True-False Questions:**

**Mark "T" for True or "F" for False in the space before each question.**

- \_\_\_\_\_ 1. Everyone loses money when the U.S. inflation rate increases.
- \_\_\_\_\_ 2. The U.S. inflation rate is measured by the Consumer Price Index or CPI.
- \_\_\_\_\_ 3. U.S. inflation rates have been in the double digits (i.e., 10% or higher) in the past.
- \_\_\_\_\_ 4. The longest period of deflation (i.e., negative inflation) in the U.S. in the 20<sup>th</sup> century was during the Great Depression years of the 1930s.
- \_\_\_\_\_ 5. One of the causes of inflation is low demand for products and services.



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