Baskets, Base Years, and Bias: Constructing and Using a Student Price Index

Lesson by

Sherilyn Narker, economic and financial education specialist, Federal Reserve Bank of Atlanta

Lesson description

In this activity, students will simulate how changes in the money supply in their classroom economy affect the price of a market basket of goods auctioned in their classroom. Students will then construct a price index using a simplified basket of teen-friendly goods and services. Using their market basket values, students will calculate a student price index and an inflation rate. Students will prepare a short paper or presentation analyzing the validity of using their Student Price Index as a measure of inflation.

Concepts

Base year
Bonds
Consumer Price Index (CPI)
Federal Reserve System
Fiscal policy
Inflation
Inflation rate
Market basket
Monetary policy
Money supply
Open market operations
Substitution bias
Unmeasured quality changes

Objectives

Students will be able to:

- Define key terms such as market basket, Consumer Price Index, inflation, inflation rate, substitution bias, and unmeasured quality changes
- Simulate how changes in fiscal policy can affect the price level in the economy
- Simulate how changes in the money supply can affect the price of a market basket of goods
- Describe how open market operations cause changes in the money supply
- Calculate a market basket value, a student price index number, and the inflation rate
- Contrast two market basket values, determining reasons for differences in value
- Describe the strengths and weaknesses of using a price index as a measure of inflation in a brief paper or during an oral presentation

Related content areas

Government/Economics/Business Education

Time required

(110 minutes) Two regular 55-minute class periods or one class period on block schedule

Baskets, Base Years, and Bias: Constructing and Using a Student Price Index

Materials

- SMART Board slides or PowerPoint slides (Baskets, Base Years, and Bias: Constructing and Using a Student Price Index)
- Simulation Item 1: Classroom Currency
- Simulation Item 2: Classroom Bonds
- Visual 1: Inflation Simulation Chart
- Visual 2: Consumer Price Index Categories and Weights
- Visual 3: Student Calculations Record Chart
- Handout 1: Student Price Index Instructions (one per student or one per group)
- Handout 2: Student Price Index Market Basket of Goods/Services (one per student or one per group)
- Digital whiteboard (recommended)
- Student response system (recommended)

Preparation

Read the lesson description. Prior to conducting the lesson, print and cut apart enough classroom currency and bonds to run the four rounds of the simulation. For example, in a class of 30 students, you will need 25 $1 bills and five $5 bonds for round one. In round two, you will need 15 additional $1 bills to provide a tax rebate to some students. In round three, you will need 25 additional $1 bills to buy bonds from the five bondholders. In round four, you will not need any additional $1 bills, but you will sell the five $5 bonds back to students.

Formative assessment option

Step 7 in the procedures suggests showing "The Fed Explains Inflation" video. Teachers have the option of assigning this video to students through the Fed's Econ Lowdown Video Q&A website (bts.stlouisfed.org/econ_ed/online_learning/index.php?page=vid_q_a&id=17&grp=1). Teachers can use the instructions found on page 9 in this lesson to register their students for the Video Q&A. The students will receive login instructions from their teacher and access the video on their home computer or on a classroom device. After viewing the video, students will answer questions about the content. The students' scores will be automatically displayed in the teacher's Econ Lowdown grade book, which will give the instructor an idea of student understanding prior to implementing lesson.

Procedures: Instructions for the SMART Board appear in italics. Content background is in regular type.

1. *Open the SMART or PowerPoint presentation.*

2. *Display slide 1. Review the lesson objectives.*

3. Introduce the lesson by asking the question: "Why does money have value?"

4. Guide the discussion until participants have generated the idea that money has value because we can use it to purchase the goods and services we need now or at some point in the future.

5. *Display slide 2. Click on each image to reinforce the reasons that money has value.*

6. Tell students that if it takes an increasing amount of money to make the same purchases, then the purchasing power of the money is decreasing.

7. If you did not use the Video Q&A formative assessment option, *display slide 3. Click the icon on the image to play the "Fed Explains Inflation" video.* (The video Q&A questions are available in a print format on page 20 of this document; an answer key is on page 22. Teachers who know the SMART software can also insert these questions into the SMART Board file to use with the SMART student response system remotes.)

8. *Display slide 4, Visual 1. Use the slide to record information during the Inflation Simulation (25 minutes).* (You may want to require the students to complete a personal copy of Visual 1 to keep in their notebook or to submit for a grade.)

9. Give each student either $1 of classroom currency or a $5 classroom bond.

10. *Record the value of the "dollars" and "bonds" held by the students on the chart next to Round 1 in the columns labeled Cash Held by Students and Value of Classroom Bonds, respectively.*

11. Hold up a small bag of mixed candies or other small goodies. Ask interested students to bid on the bag. Take a bid of $1 quickly before they combine their funds and push the price up too fast. Ask them why they didn't bid more. Students will most likely say that they had only $1 each.

12. *Record the price on the chart, slide 4, Visual 1 in the column labeled Price of Good.*

13. Tell students you are concerned that not enough people seemed interested in buying the market basket of goods and you are concerned that the economy may be slowing. Tell students that you successfully lobbied Congress for a tax decrease so the students can keep more of the money they earn to spend on goods and services.

14. Go around the room and give some students different amounts of dollars, telling them that this is the additional income they retain for saving and spending because their taxes have fallen. When some students ask why they didn't receive any more money, tell them this tax cut is only for people who make more than $250,000 a year.

15. *Use slide 4, Visual 1, to update the information for Round 2 by filling in the cash held by students in the column labeled Cash Held by Students.* This is the Round 1 amount minus $1 paid for the candy plus the amount of additional money distributed to the students due to the tax decrease. **The bond value will remain the same.**

16. Hold up another small bag of mixed candies or other small goodies. Make sure it is identical to the first bag. Take opening bids from the students. Allow the price to rise a bit in the auction and then take a final bid.

17. *Record the bid on the chart in the column labeled Price of Good next to Round 2 on slide 4, Visual 1.*

18. Ask the students why the price went up. They will likely respond that people had more money to spend than in Round 1. Ask them why this was true. They will likely respond that the government took away less of their income in taxes.

19. Tell students that this is known as **fiscal policy** and it is an action that Congress and the president can use to encourage increased consumer spending in the economy.

20. *Write Expansionary Fiscal Policy in the Reason for Change column on the chart next to Round 2.*

21. Tell the students that they are now going to calculate the percentage by which the price of the bag of candy rose between Round 1 and Round 2. Use the following formula to calculate the change: [(**Round 2 Price — Round 1 Price) / Round 1 Price] X 100 = Percentage Change in Price.**

22. *Record the percentage change in the column labeled Percent Change in Price on slide 4, Visual 1 for Round 2.* Emphasize that the product remained the same, only the cost of buying it changed.

23. Tell students that an important institution in our country becomes concerned when not enough people buy products relative to how many have been produced. The U.S. Congress has been this institution, called the **Federal Reserve System**, the authority by to promote price stability and maximum employment.

24. Explain that in the event of a downturn in the economy, known as a **recession**, the Federal Reserve may encourage increased economic activity by increasing the availability of money and credit in the economy. Explain how this is often done through a policy option called **open market operations**, which is the buying and selling of government securities, or bonds, by the Federal Reserve. This market activity affects bank reserves, interest rates, and the **money supply.** Changes in the money supply also affect the currency and demand deposits at financial institutions.

25. Tell students that **bond**s are certificates of indebtedness that a government or publicly held corporation issues, promising to repay borrowed money at a fixed rate of interest and at a specified date of maturity.

26. Tell students you will now act as the Federal Reserve and buy some **bonds** from them. This is an example of **open market operations.**

27. Go around the room and buy all the bonds held by the students for face value.

28. *Update the information for Round 3 by filling in the cash held by students.* This is the Round 2 amount minus the price of the bag of candy in Round 2 plus the amount of cash distributed when the bonds were purchased from the students. **The bond value should now be zero.**

29. Hold up another small bag of mixed candies or other small goodies. Make sure this bag is identical to the first bag. Ask the students to bid on the bag. Allow time for the price to rise significantly in the auction and then take a bid. Allow students to combine funds.

30. *Record the winning bid on the chart in the column labeled Price of Good next to Round 3 on slide 4, Visual 1.*

31. Ask the students why the price rose. They will likely respond that people had more money to spend than in Round 2.

32. Ask them why this was true. They will likely respond that students who held bonds received money and could spend more. They could not use the bonds to purchase the candy, but they could use the money. Tell students that this is like **monetary policy**, something the Federal Reserve System can use to increase economic activity when it is concerned about a slowdown in the economy.

33. *Write Expansionary Monetary Policy in the Reason for Change column on the chart next to Round 3.*

34. Tell the students that they are now going to calculate the percentage by which the price of the bag of candy rose between Round 2 and Round 3. Use the same formula to calculate the change and record it in the table. Emphasize that the product remained the same, only the cost of buying it changed.

35. Ask the students how they feel about the rising price of the bag of goods. Answers will vary, but some students will probably express concern that their money doesn't go as far as it did in the beginning of the simulation.

36. Tell the students that sometimes the average price level of all goods and services will rise in an economy, not just the price of one good. Ask the students if they know what that is called. Most likely, at least one student will say **inflation**.

37. Tell students that as a result of these actions, the Federal Reserve System is now concerned that prices in the economy are rising too quickly and has become concerned about inflation.

38. Explain that the Federal Reserve can fight inflation through **open market operations,** which will now involve the selling of bonds.

39. Tell students you will now act as the Federal Reserve and sell some bonds. Go to students who still have money and sell them a bond. Take their money. Be sure to sell enough bonds to make the price of the last bag of candy remain the same or fall. (If the class still has a lot of money to combine, the price may still increase. If the price does increase, don't worry, it is likely to increase by a smaller percentage than in the previous rounds and will still show the Fed's power to slow inflation.)

40. *Update the information for Round 4 by filling in the cash held by students.* This is the Round 3 amount minus the price of the bag of candy in Round 3 and the amount of cash removed from the class when the bonds were sold to the students.

41. *Update the bond value based on the total value of bonds sold to the students.*

42. Hold up another small bag of mixed candies or other small goodies. Make sure it is identical to the first bag. Ask the students to bid on the bag. Try to take a bid that is lower than the Round 3 price or at least one that has increased at a lower rate than the Round 2 to Round 3 rate.

43. *Record the bid on the chart in the column labeled Price of Good next to Round 4 on slide 4, Visual 1.*

44. Ask the students why the price decreased. (If the price did not fall, ask why it remained the same or increased at a slower rate.) They will likely respond that people had less money to spend than in Round 3. Ask them why this was true. They will likely respond that students who held money received bonds which cannot be used to buy goods and services. Remind students that this is known as **contractionary**

monetary policy and the Federal Reserve System can use it to decrease economic activity when it is concerned about a rising price level.

45. *Write **Contractionary Monetary Policy** in the Reason for Change column on the chart next to Round 4.*

46. Tell the students that they are now going to calculate the percentage by which the price of the bag of candy fell or rose between Round 3 and Round 4. Use the same formula to calculate the change and record it in the table. Emphasize that the product remained the same, only the cost of buying it changed. If the price still rose, emphasize how the Federal Reserve was able to slow the rate of change in the price which is still combating the inflation.

47. *Pricing a Market Basket (30 minutes)*—Ask students why the Federal Reserve is concerned about inflation in the economy. Allow the students to discuss. They will likely respond that the money people have buys less than it did in the past, thus their purchasing power falls.

48. Tell students that the Federal Reserve must watch inflation closely and act appropriately to keep prices stable. Explain that one of the tools used to measure changes in the price level is called the **Consumer Price Index**. (Be sure the students know that this is only one of several indicators the Fed watches.)

49. Tell students the **Consumer Price Index** measures changes in the cost of living for the average urban family and they will be simulating the process used by the Bureau of Labor Statistics (BLS) to create it.

50. *Display slide 5, Visual 2*. Tell students these are the categories and weights of goods and services that the Bureau of Labor Statistics has designated for the market basket purchased by the average urban consumer.

51. Tell students that they will be pricing a market basket for the average American teenager.

52. Divide students into groups of three. It is important to keep the initial groups small because they will combine with another group later in the activity. There should be an even number of groups so the groups can pair off later. Pairs are better than groups of four if you are unable to divide evenly by three.

53. Distribute Handouts 1 and 2.

54. *Display slide 6, Handout 2—Student Market Basket.* Tell students that they will be estimating prices for each of the goods and services listed in the basket. For any good or service that has more than one in the quantity column, they must multiply the price times the quantity and enter it in the last column.

55. *Display slide 7, Visual 3.* Tell students that they will enter their calculations on the chart as they finish each step of the activity.

56. Give students about 15–20 minutes to price the goods and compute the overall value of their market basket. Display a countdown timer to keep the students on schedule. As groups finish, have them enter their market basket value on the chart. There is usually a big gap between the highest-value and lowest-

value basket. Tell the students that this is acceptable, and they are going to use these differences later to evaluate the use of the CPI as a measure of inflation.

57. After all groups have entered their market basket value, select the lowest-value market basket and designate it as the base year. Tell students that the **base year** is a year selected for comparison to other years when constructing an index such as the Consumer Price Index. Explain the value of the market basket in the base year is not always lower than other years and any year could be selected as the base year. However, you have selected the lowest as the base year so that all CPI calculations will be higher than the base-year CPI.

58. Tell the students to follow the instructions in Handout 1 on calculating the CPI and the inflation rate. They should enter these numbers on the chart as they finish their calculations.

59. After the students have entered everything on the chart, ask them to make some observations about the data. Their observations may include any of the following information: rapture

    a. The base year CPI is equal to 100.
    b. Some inflation rates are very large while others are very small.

60. During the discussion, be sure to emphasize that the base year CPI is always equal to 100 because the current year and the base year are equal.

61. *Group Comparison, Analysis, and Presentation (40 minutes)—Display slide 8.* Tell each group to combine with another group and follow the instructions for the written/presentation response.

62. Give the paired groups 10–15 minutes to answer the questions. Set a countdown timer to keep them on track. (Depending on the number of students, you can have each individual write his or her response, require only one written response per group, or just have them discuss and present their group's answers orally.)

63. *Display slide 9.*

64. When the groups have prepared their answers, ask each to present or lead a discussion during which you hear several groups' ideas for each question or prompt. At the end of the discussion, be sure you have discussed the problems with the CPI such as **substitution bias** (consumers substitute different goods when prices rise), **unmeasured quality changes** (consumers may buy a different amount of the good if the quality of the good rises or falls from the previous period measured), and different consumer purchasing patterns (the CPI is only a measure of inflation for a person if that person's purchasing pattern is the same as the market basket). Tell students that because of these problems, many economists estimate that the CPI overstates the inflation rate by as much as 1 percent.

65. *(Extension—Optional) Display slide 10.* At the end of the lesson, there is a pie chart you can edit to show the categories and weights for the Student Market Basket. If computers or laptops are easily accessible, teachers can have the student groups make their own versions of the pie charts to show how the percentages of the total baskets differ by group. The categories for the student market basket have been entered in equal percentages and will need to be edited by each group. Simply right click the chart area and select **Edit data** to make changes.

66. *Review (10 minutes)* If you required written responses from your students, collect them now. Review the main points of the lesson. Ideally, you can do this using a student response system associated with your SMART or Promethean Board. Use the following points to create your questions in the response system.

    a. What do we call a rise in the average price level? *(inflation)*
    b. What index do we use to measure changes in the cost of living for the average urban family? *(Consumer Price Index)*
    c. Put the following steps in the correct order. (Be sure to mix them up, they are in correct order below.)
        i. Fix the market basket.
        ii. Find prices for the market basket goods.
        iii. Compute basket value.
        iv. Calculate the Consumer Price Index.
        v. Use two CPI numbers to calculate the inflation rate.
    d. What problem associated with CPI refers to people buying other goods when the price of a good in the basket goes up? *(substitution bias)*

67. *Display slide 11.* Select different students to come to the board to complete the vocabulary review.

68. *Reset slide 11.* Select another student and repeat as many times as you need.

Baskets, Base Years, and Bias: Constructing and Using a Student Price Index

Econ Lowdown Instructor Management Setup

Use this paper to register yourself as an instructor for Econ Lowdown. We recommend that you use a personal e-mail account since some school district firewalls might reject the confirmation e-mail. Please follow the instructions below.

1. Go to bts.stlouisfed.org/econ_ed/online_learning/.
2. Click **Register** on the left side.
3. Enter information into the required fields on the form and click **Submit**.
4. Go to your e-mail account and check for a confirmation e-mail.
   If you do not see the confirmation e-mail in your inbox, check your spam/junk folder. Usually, you will find it in that location.
5. Follow the information provided in your confirmation e-mail and log onto the Instructor Management Panel.
6. Click on **My Classrooms**.
7. Enter the information into the Class Name, Begin Date, and End Date fields, for example:
   Class Name: Fall 2014 Economics 1st Period
   Begin Date: 08/11/14
   End Date: 12/19/14
8. Click **Add New Classroom**. The classroom name should appear in the left hand navigation.
9. A dropdown box appears. Select how many students you are adding to your classroom, choosing one of these three options:
   a. Generate generic student names like Student A, Student B, etc.
   b. "Import student list" allows you to pull from a spreadsheet saved on your computer. Your file must be saved in CSV format. You can save any Excel document in this format by choosing **File>Save as** and using the dropdown box to choose CSV.
   c. Type student names directly into the program.
10. Click the **Add Students** button under your classroom name to add students.
11. Click **Print Student Login** to print documents with your students' user names and passwords to distribute to your class.
12. Click the green **Add Course/Video** button that appears under the student list.
    You will see a list of all the course and video options.
13. Click "The Fed Explains Inflation" video.
14. Select **Add to Classroom**.
15. When your students log into the site, they will see this video as an option. They will be instructed to answer the questions after viewing the video.
16. If you click on this video title listed under your class name, you will be able to see each student's progress and the score they earned on the video questions.

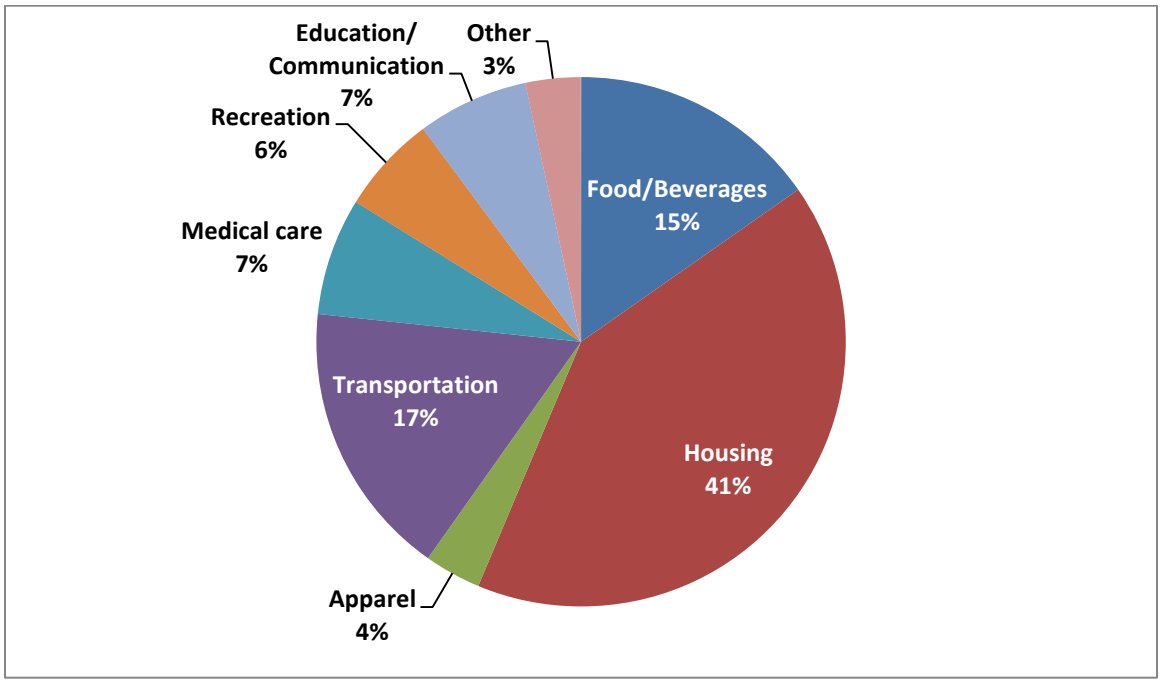
Simulation Item 1: Classroom Currency

Simulation Item 2: Classroom Bonds

Visual 1: Inflation Simulation Chart

Round	Cash Held by Students	Value of Classroom Bonds	Price of Good	Reason for Change	Percent Change in Price $\frac{\text{Current Round Price} - \text{Previous Round Price}}{\text{Previous Round Price}} \times 100$
1.					
2.					
3.					
4.					

Visual 2: 2012 Consumer Price Index Categories and Weights



Source: U.S. Bureau of Labor Statistics

Visual 3: Student Calculations Record Sheet

Group Name	Value of Each Student Market Basket	Computed Student Price Index	Inflation Rate
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

Handout 1: Student Price Index Instructions

1. Get into groups of three.
2. Give your group a name.
3. Discuss and agree upon a price for each good in your Student Price Index.
4. If the quantity is greater than one, multiply your price times the quantity for the item before recording the amount in the price column.
5. Calculate the totals for each category.
6. Calculate the totals for your entire market basket of goods in the Student Price Index and enter it at the top of the paper and on Visual 3 displayed on the board.
7. Look at the market basket values shown on Visual 3. Identify the lowest-value basket and designate this as your base year.
8. Using the lowest-value basket as your base-year value and your group's value as the current year, calculate the Student Price Index using the following formula:

$$\text{CPI} = \frac{\text{Current year market basket value}}{\text{Base year market basket value}} \times 100$$

9. Enter your CPI on Visual 3 displayed on the board.
10. Choose another group's price index. (It does not matter if their price index is higher or lower than yours.) Using the higher CPI as Year 2 and the lower CPI as Year 1, calculate the "inflation rate" with this formula:

$$\text{Inflation Rate} = \frac{\text{Year 2 CPI} - \text{Year 1 CPI}}{\text{Year 1 CPI}} \times 100$$

11. Enter your Inflation Rate on Visual 3 displayed on the board.
12. Combine your group with another group that had a market basket total different from your group's total. Compare and contrast your group's market basket prices with the other group's basket prices. Discuss the reasons behind the major differences in your prices.
13. Everyone in your group must write and submit answers to the following questions, as well as prepare a short presentation to share with the class. Although everyone should participate in a discussion, assign one question to each group member for the presentation.
    a. Which prices in your market basket were the most different between your group and the other group? Why do you think this happened?
    b. What items in the market basket would you eliminate if your group had the responsibility of creating the index? Why?
    c. What items do you think should be added to the market basket to make your Student Price Index?
    d. How might quality changes of the goods or services in your market basket affect the validity of your Student Price Index numbers over time? Explain.
    e. How would you expect teenagers to respond to price increases for individual goods and services in the basket? Do you think teens would respond differently to increases in prices of some goods versus others? Explain.
    f. Based on your analysis, what circumstances could limit the usefulness of the CPI as a measure of the cost of living? Explain.

Handout 2: Student Market Basket of Goods (page1 of 3)

Basket of Goods _____ – _____ School Year = Total Value: $_____

Good or Service		**Quantity (per year)**	**Price X Quantity =**
School supplies			
Ballpoint pens		2 packs of 10	
Graphing calculator		1	
Backpack		1	
Lined notebook paper		4 packs of 250 sheets	
Binders		5	
Other: _____		_____	
School supplies total:			_____
Senior "stuff"			
Senior dues		1	
Yearbook		1	
Prom tickets (per couple)		1	
Cap and gown		1	
Tuxedo rental		1	
Prom dress		1	
Other: _____		_____	
Senior stuff total:			_____
Entertainment			
Music downloads		10	
Movie tickets		12	
Tickets to sports games		5	
Concert tickets		2	
Teen "nightclub" tickets		10	
Magazine subscriptions		2	
Other: _____		_____	

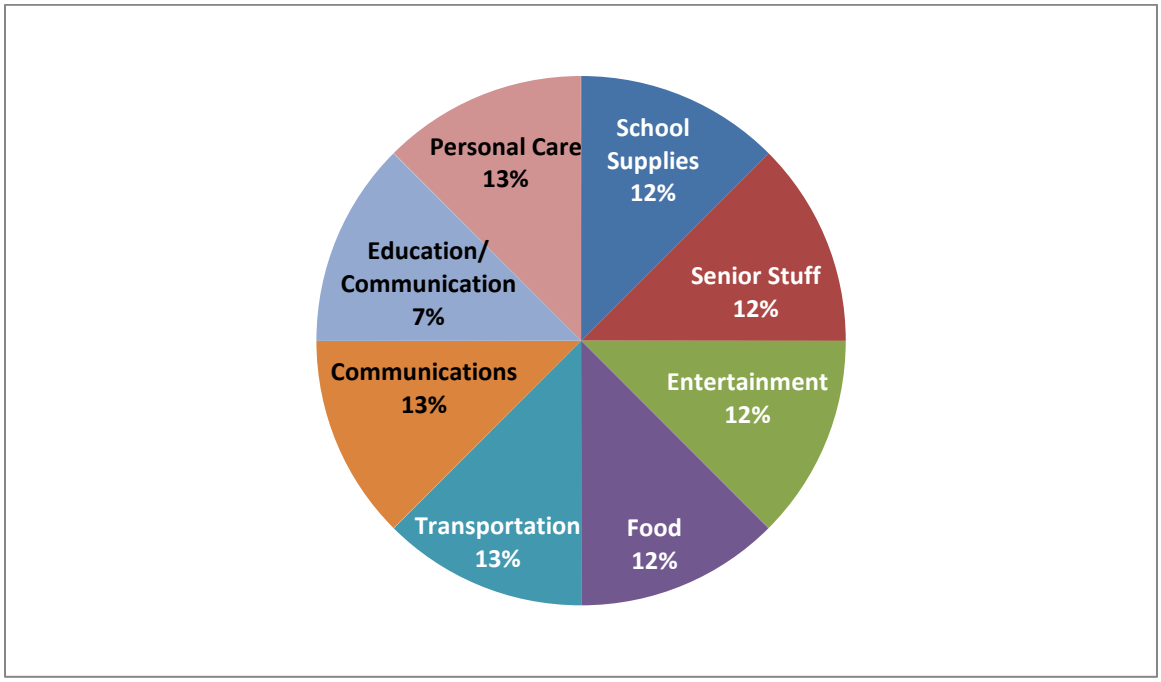
Handout 2: Student Market Basket of Goods (page 2 of 3)

Entertainment total:			_____
Food			
Pizza: large, 1-topping		15	
Fast food burritos		20	
Fast food hamburgers		20	
Fast food roast beef sandwich		20	
Ice cream cones		24	
Gourmet coffee drinks		24	
Other: _____		_____	
Food total:			_____
Transportation			
Gasoline: Gallon of unleaded		219	
Car insurance (for one year)		1	
Other: _____		_____	
Transportation total:			_____
Communications			
Cell phone		1	
Monthly cell phone service plan		12	
Other: _____		_____	
Communications total:			_____
Clothes			
Jeans		5	
Shirts		15	
Sweatshirts		3	
Bathing suit		2	
Shoes (other than athletic)		2	

Handout 2: Student Market Basket of Goods (page 3 of 3)

Athletic shoes		2	
Other: _____		_____	
Clothes total:			_____
Personal care			
Deodorant		12	
Haircuts/hairstyling		8	
Toothpaste		5	
Chapstick		6	
Other: _____		_____	
Personal Care Total:			_____

Extension (Visual 4): Student Price Index Categories and Weights



Baskets, Base Years, and Bias: Constructing and Using a Student Price Index

"The Fed Explains Inflation"

1. **One negative aspect of inflation for the average consumer is**
    a. Wages and salaries rise
    b. Interest rates on savings rise
    c. The purchasing power of income falls
    d. The prices of assets, such as homes, rise
2. **Inflation can best be described as**
    a. An increase in the price of necessities
    b. An increase in the purchasing power of the dollar
    c. A rise in the average price level of goods and services
    d. An increase in the amount of goods and services produced in the economy
3. **The cost of living refers to**
    a. The current price level in the economy
    b. Changes in the price level from one year to the next
    c. Increases in wages and salaries based on the inflation rate
    d. The amount of money needed to sustain a particular level of living
4. **The Federal Reserve System keeps price level stable by**
    a. Adjusting the number of dollars in circulation.
    b. Supervising and regulating the banking system.
    c. Processing electronic payments for commercial banks.
    d. Recommending changes to taxes and government spending.
5. **Which of the following inflationary situations could Federal Reserve monetary policy most directly address? Select all that apply.**
    a. The increases in price level are caused by too many dollars circulating in the economy
    b. Corn, a major input in food and energy production, suffers a drought forcing price level upwards
    c. Higher wage demands by workers increase production costs and the price level of goods and services
    d. Price level rises after sustained increases in the price of oil, a major input into many goods and services in the economy

6. **Protecting the purchasing power of the dollar means**
    a. Keeping the price level constant at all times
    b. Ensuring that increases in price level will be gradual and predictable
    c. Setting maximum prices for necessities so most people will be able to afford them
    d. Insuring everyone's bank deposits through the Federal Deposit Insurance Corporation
7. **Price level can be defined as**
    a. The percent change in prices from one year to the next.
    b. The average of the current price of everything sold in our economy
    c. The market value of goods and services produced in the economy in a given year
    d. The annual cost of maintaining a particular standard of living within an economy.
8. **One major purpose of Federal Reserve monetary policy is to**
    a. Reduce the number of dollars in circulation when price level is rising.
    b. To adjust marginal tax rates downward when economic activity slows.
    c. Increase production of necessary goods and services during times of shortage.
    d. To reduce government spending in the economy when the price level is rising too fast.
9. **With which of the following statements would most economists agree?**
    a. Any increase in the inflation rate is bad for the economy
    b. Increases in prices are always due to inflation in the economy
    c. Gradual, predictable increases in the inflation rate promotes economic stability
    d. Increases in the inflation rate are fine as long as they are equal to increases in the GDP growth rate
10. **An increase in prices is always due to inflation.**
    a. True
    b. False

"The Fed Explains Inflation" Answer Key

(A * indicates the correct answer.)

1. One negative aspect of inflation for the average consumer is
    a. Wages and salaries rise
    b. Interest rates on savings rise
    c. The purchasing power of income falls*
    d. The prices of assets, such as homes, rise
2. Inflation can best be described as
    a. An increase in the price of necessities
    b. An increase in the purchasing power of the dollar
    c. A rise in the average price level of goods and services*
    d. An increase in the amount of goods and services produced in the economy
3. The cost of living refers to
    a. The current price level in the economy
    b. Changes in the price level from one year to the next
    c. Increases in wages and salaries based on the inflation rate
    d. The amount of money needed to sustain a particular level of living*
4. The Federal Reserve System keeps price level stable by
    a. Adjusting the number of dollars in circulation*
    b. Supervising and regulating the banking system
    c. Processing electronic payments for commercial banks
    d. Recommending changes to taxes and government spending
5. Which of the following inflationary situations could Federal Reserve monetary policy most directly address? Select all that apply.
    a. The increases in price level are caused by too many dollars circulating in the economy*
    b. Corn, a major input in food and energy production, suffers a drought forcing price level upwards
    c. Higher wage demands by workers increase production costs and the price level of goods and services
    d. Price level rises after sustained increases in the price of oil, a major input into many goods and services in the economy
6. Protecting the purchasing power of the dollar means
    a. Keeping the price level constant at all times
    b. Ensuring that increases in price level will be gradual and predictable*

c. Setting maximum prices for necessities so most people will be able to afford them
d. Insuring everyone's bank deposits through the Federal Deposit insurance Corporation

7. Price level can be defined as
   a. The percent change in prices from one year to another year
   b. The average of the current price of everything sold in our economy*
   c. The market value of goods and services produced in the economy in a given year
   d. The annual cost of maintaining a particular standard of living within an economy
8. One major purpose of Federal Reserve monetary policy is to
   a. Reduce the number of dollars in circulation when price level is rising*
   b. To adjust marginal tax rates downward when economic activity slows
   c. Increase production of necessary goods and services during times of shortage
   d. To reduce government spending in the economy when price level is rising too fast
9. With which of the following statements would most economists agree?
   a. Any increase in the inflation rate is bad for the economy
   b. Increases in prices are always due to inflation in the economy
   c. Gradual, predictable increases in the inflation rate promotes economic stability*
   d. D Increases in the inflation rate are fine as long as they are equal to increases in the GDP growth rate
10. An increase in prices is always due to inflation
    a. True
    b. False*

Baskets, Base Years, and Bias: Constructing and Using a Student Price Index

Standards and Benchmarks

National Standards for Economic Education

Content Standard 19: Unemployment and Inflation

a. Students will understand that inflation imposes costs on individuals and the overall economy.
b. Students will be able to use this knowledge to make informed decisions by anticipating the consequences of inflation and unemployment.

Content Standard 20: Fiscal and Monetary Policy

c. Students will understand that federal government budgetary policy and the Federal Reserve System's monetary policy influence the overall levels of employment, output, and prices.
d. Students will be able to use this knowledge to anticipate the impact of federal government and Federal Reserve System macroeconomic policy decisions on themselves and others.

National Curriculum Standards:

Common Core Standards

Grades 9-10 students	Grades 11-12 students
Integration of Knowledge and Ideas	
7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.	7. Integrate and evaluate multiple sources of information presented in diverse formats and media
Writing Standards for Literacy in History/Social Studies 6 – 12 Research to Build and Present Knowledge	
7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.