# CPI Market Basket

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## Standards and Benchmarks (see page 20)

## Lesson Description

In this lesson, students will explore a market basket of goods and services and determine what is in each category in the market basket. Students learn that the consumer price index is made up of market basket goods and services for which the prices are compared each month to determine if the price of any of the items has changed and if there has been inflation. Students will engage in role-play scenarios to understand the effects of inflation.

## Concepts

Aggregate
Consumer
Consumer price index (CPI)
Index
Inflation
Market basket
Price
Purchasing power

## Objectives

Students will be able to

- define aggregate, consumer, CPI, index, inflation, market basket, price, and purchasing power;
- analyze CPI market basket contents;
- identify CPI as a measure of inflation;
- explain the impact of inflation on purchasing power; and
- explain how inflation changes people's behaviors.

## Compelling Question

Why do people care about inflation?

## Time Required

50 minutes

## Materials

- *"CPI Market Basket" Power Point slide deck, slides 1—13*
- *Toy shopping cart or a large box, with the letters CPI on it*
- *Eight small boxes that fit into the shopping cart or large box*
- *Handout 1, labels for each of the eight boxes*
- *Handout 2, cutouts to go into each of the eight boxes*

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- *Handouts 3, one copy for each student*
- *Handout 4, one for each student to be copied on the back of Handout 3*
- *Handout 4 and 7 Answer Keys for the teacher*
- *Handout 5, eight copies, one for each student group*
- *Handout 6, 10 copies, one for each student in the role-play scenarios*
- *Handout 7, one copy for each student*

## Preparation

Put the letters CPI on the shopping cart/large box. Cut out labels from *Handout 1: CPI Market Basket* and attach one label to each of the eight boxes. Cut out the pictures from *Handout 2: CPI Items* and place the items for each category in the correct box.

## Procedure

1. Bring out the shopping cart and the eight boxes filled with cutouts. Discuss the following:
   - Who likes to go shopping? *(Answers will vary.)*
   - Would anyone like to have a job shopping? *(Answers will vary.)*
2. Display Slide 2 and explain that the Bureau of Labor Statistics, also called the BLS, is a federal government office. Each month BLS data collectors shop; that is, they visit and call stores and doctors' offices to collect prices on thousands of goods and services. They check the prices of the same items each month and record the prices.
3. Distribute a copy of *Handout 3: Consumer Price Index Vocabulary* to each student. Then instruct the students to look at the shopping cart. Ask them what letters are on the cart. (CPI) Display Slide 3 and explain that CPI is an acronym for consumer price index. Instruct the students to find Consumer Price Index on the web/diagram on their handout.
4. Point out that as the web shows, there are many terms related to understanding the Consumer Price Index. Display Slides 4-5 and discuss the following:
   - What does it mean to be a **consumer**? *(It means you are a person who buys goods and services to satisfy wants.)*
   - Look at the definition list on your handout and find the definition for consumer. Write the number for the definition in the circle labeled consumer on the web.
   - What definition in the list describes the word price? *(The amount of money buyers must pay to buy a good or service)*
   - Write the number for the definition in the circle labeled price on the web.
   - **Index** has more than one definition. We often think of an index as the place in the back of a book where we look to find a page on which a specific topic is covered.
   - There's another definition for index. An index is a measure of something. Find the word index on the web.
   - What definition on your handout best matches the word index? *(A measure of change in the value of items over time on a given date)*
   - Write the number for the definition in the circle labeled index on the web.

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- Look at the definitions of consumer, price, and index on the handout. Based on these, what definition on the handout best matches the term consumer price index? *(A measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services)*
- Write the number for the definition of consumer price index in the circle labeled consumer price index.

5. Tell the students that today they are going to explore some of the thousands of goods and services for which BLS shoppers check prices each month. Explain that just as we often use a shopping basket for gathering all the goods we want to purchase when we go to a store, the BLS shoppers gather prices of goods and services. The aggregate or sum of all the shopping is called the **market basket**.

6. Instruct the students to look at the definitions on Handout 3 and ask them which definition best fits the term aggregate. *(A collection or sum of many parts)* Tell students to write the number for the definition in the circle on the web that is labeled aggregate.

7. Instruct students to look at the definition list on Handout 3. Ask them which definition best fits the term market basket. *(A selected group of consumer goods and services whose prices are tracked for calculating a consumer price index)* Have them write the number for the definition in the circle on the web that is labeled market basket.

8. Explain that the boxes in our market basket represent each of the eight categories used by the BLS. Tell the students to turn over their definition sheet to *Handout 4: Bureau of Labor Statistics (BLS) Shopper Checklist*.

9. Display Slide 6 and use the link to review the eight categories or use the link here: https://bit.ly/bls_market_basket.

10. Explain to the students that they will work in groups to explore the contents of these boxes. Divide the class into eight groups. Distribute a box to each group. Instruct the students in each group to do the following:
    - Find the name on your box. Look for the name on your handout and circle it.
    - Open your box and identify the contents, and then record the contents and price of each good or service on Handout 4.

11. Circulate around the room and see if any students have questions about the contents of their boxes. Then ask each group to report out about its box, the goods and services in the box, and their prices.

12. Tell the groups to return all the items to their box, collect the boxes and return them to the market basket. Discuss the following:
    - What does it mean to purchase something? *(It means you buy it.)*
    - Did the items pictured in your box represent goods and services that typically satisfy people's wants? *(Yes.)*

13. Explain to the students that the BLS special shoppers are not satisfying their personal wants when they do their job. They are not buying the items. Instead, they do what the students just did—record the prices of the items. BLS shoppers record prices each month, they are tracking changes in prices of goods and services over time.

14. Display Slide 7, reveal questions one at a time, and discuss the following:
    - What definition refers to tracking prices? *(market basket)*

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- Why do people care if the prices of goods and services change? *(Answers will vary but may include that when prices are high, we can't buy a lot and that when prices are low, we sometimes buy more.)*
- The amount of goods and services people can buy with their money is called **purchasing power**.
- Find the definition of purchasing power on your handout. Write the number for the definition in the circle on the web labeled purchasing power.
- What will happen to your purchasing power if the prices of goods and services increase? *(Purchasing power goes down. I can't buy as much with the same amount of money as I could at a lower price.)*
- What will happen to your purchasing power if the prices of a goods and service decrease? *(Purchasing power goes up. I can buy more with the same amount of money than I could at higher prices.)*

15. Explain that they are going to make some comparisons. Distribute a copy of *Handout 5: Previous Prices for Comparison* to each group. Display Slides 8-9 and review the instructions.
    - Find the recorded past prices—the 2022 prices—for your group's items on Handout 5.
    - Record those prices on Handout 4 in the column labeled "Price January 2022".
    - In the column labeled "Price difference +/- ", write a plus or minus sign and the amount of change. (Example: If the 2022 price was $10, and the 2024 price is $12, write + $2.).
    - If there's no change in price from 2022 to 2024 write "no change."
    - Discuss and decide if overall the prices for the goods in your part of the market basket went up, went down, or stayed the same.
    - If your group thinks over all prices for your box have increased, group members should stand. If your group thinks over all prices for your box stayed the same, group members should remain seated. If your group thinks over all prices for your box decreased, group members should kneel or sit on the floor.
16. Instruct the students to look around the room, and then discuss the following:
    - Considering and combining all the boxes in the room, do you think the overall price level went up, stayed the same, or went down? *(Given the data used for this lesson, the overall price level went up.)*
17. Display slide 10. Explain that the term we use to describe a general, sustained upward movement of prices for goods and services in an economy is **inflation**. Instruct the students to find the definition of inflation in the list on Handout 3 and to write the number of the definition in the circle labeled inflation on the web. Reveal questions one at a time and discuss the following:
    - If we have inflation, what goes up? *(The overall price level or prices of most items)*
    - And when we have inflation, what power goes down? *(Purchasing power)*
    - Why do we care about purchasing power? *(It measures how much stuff we can buy.)*
18. Explain that some of them will participate in role-plays. Ask for 10 student volunteers and distribute a copy of *Handout 6: Role-Play Scenarios* to each volunteer. Allow time for the students to act out the scenarios. At the end of each scenario, discuss the following:
    - Scenario 1: Gas Prices (Slide 11)
        - What happened to gas prices? *(They increased.)*
        - What was happening to the price of other goods and services, too? *(Also increased)*

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- What is an increase in prices like this a sign of? *(Inflation)*
- How did the change in price affect the behavior of the friends? *(They changed vacation plans; they talked about carpooling and packing their lunch.)*

- Scenario 2: Movie Theater (Slide 12)
  - What happened to the price of tickets? *(It increased.)*
  - How did this affect the customers' purchasing power? *(Their purchasing power decreased.)*
  - How did customers change their behavior as a result? *(They only bought tickets. They didn't buy popcorn or soft drinks.)*
- Scenario 3: Grocery Store (Slide 13)
  - What happened to the price of blueberries? *(It increased.)*
  - How did this change the customer's behavior? (*The customer substituted strawberries for blueberries.)*
  - Substitution for a less-expensive option is common when prices increase.
- Scenario 4: Restaurant (Slide 14)
  - Why did the sandwich shop owner raise the prices on the menu? *(Their labor and supply costs increased, so they raised prices to stay in business.)*
  - What does "There's no such thing as a free lunch" mean? *(Someone somewhere must pay for it.)*

## Closure

19. Display Slides 15-17 and reveal questions one at a time to review the content of the lesson:
    - What is a consumer? *(A person who buys goods and services to satisfy wants)*
    - What is a price? *(The amount a consumer pays to buy a good or service.)*
    - What is an index as we used the term today? *(A measure of change in the value of items over time on a given date)*
    - What is a measure of the average change over time in prices paid by consumers called? *(Consumer Price Index or CPI)*
    - What government agency collects information each month about the change in prices of thousands of items? *(Bureau of Labor Statistics or BLS)*
    - Why are the BLS shoppers checking to see if there has been a change in price for items? *(They want to see if there has been inflation.)*
    - What is inflation? *(A general, sustained upward movement of prices for goods and services in an economy)*
    - What is purchasing power? *(The amount of goods and services a unit of currency can buy)*
    - Why do people care about inflation? *(Because it affects their purchasing power)*
    - What is the connection between inflation and purchasing power? *(Inflation reduces the amount of stuff you can buy with the same amount of money. Inflation reduces purchasing power.)*
    - Give an example of the relationship between inflation and purchasing power. *(Answers will vary.)*
    - How does inflation change people's behaviors? *(They purchase fewer goods and services. They substitute lower priced goods and services for higher priced goods and services. They give up buying some things all together. Business owners may have to increase the prices they charge for goods and services.)*

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## Assessment

20. Distribute a copy of *Handout 7: Assessment* to each student. Allow time for students to work. Review their answers using *Handout 7: Assessment—Answer Key* found in the "CPI Market Basket Handout and Assessment Answer Key".

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**Handout 1: CPI Market Basket**

| |
|---|
| **Food and Beverages** |
| **Housing** |
| **Apparel (clothing)** |
| **Transportation** |
| **Medical Care** |
| **Recreation** |
| **Education and Communication** |
| **Other Goods and Services** |

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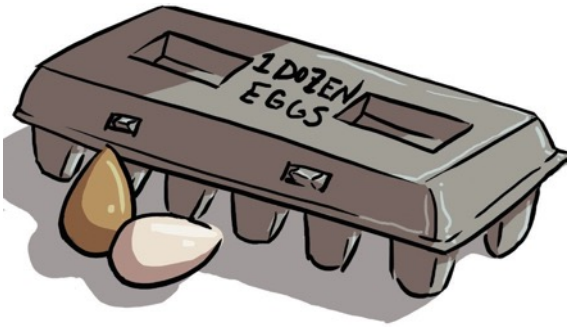
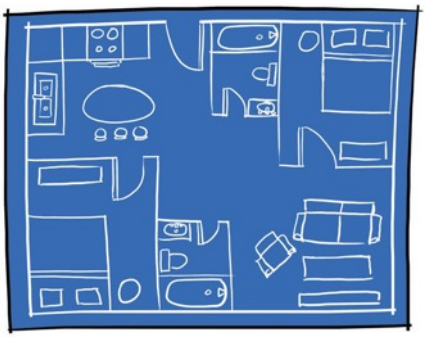
## Handout 2: CPI Items (page 1 of 5)




1 dozen large eggs
$4.20

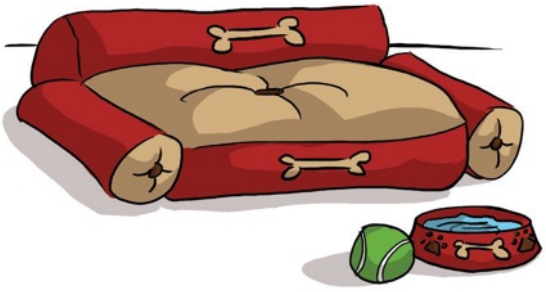
1 pound 85% lean ground beef
$5.00

24 pack of 12-oz. Coke®
$12.00



Average rent—2 bedroom/2 bath
$1,500

Bed, dresser, and desk
$1,400



Large dog bed
$55

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## Handout 2: CPI Items (page 1 of 5)

Levi's® jeans
$70

Chuck Taylor Converse All Stars®
$65

Gap® denim jacket
$90

Regular gasoline
$3.00

New Ford Escape S®
$29,500

Round trip St. Louis to Orlando
$225

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## Handout 2: CPI Items (page 3 of 5)

20-in. BMX® bike
$125

Children's eyeglasses—Lens Crafters®
$169

Coppertone® Sport 7 oz. SPF 20
$9.90

Band-Aid® variety pack 30
$2.89

32-in. LG® Smart TV
$228

Razor® scooter
$50

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## Handout 2: CPI Items (page 4 of 5)

Nike® training soccer ball
$30

Postage stamp
$0.73

Crayola® crayons 64-count box
$4.00

Fiskars® 5-in. kid's scissors
$2.00

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## Handout 2: CPI Items (page 5 of 5)

Haircut—Great Clips®
$19

One-month basic cable
$75

Small-sized dog grooming
$50

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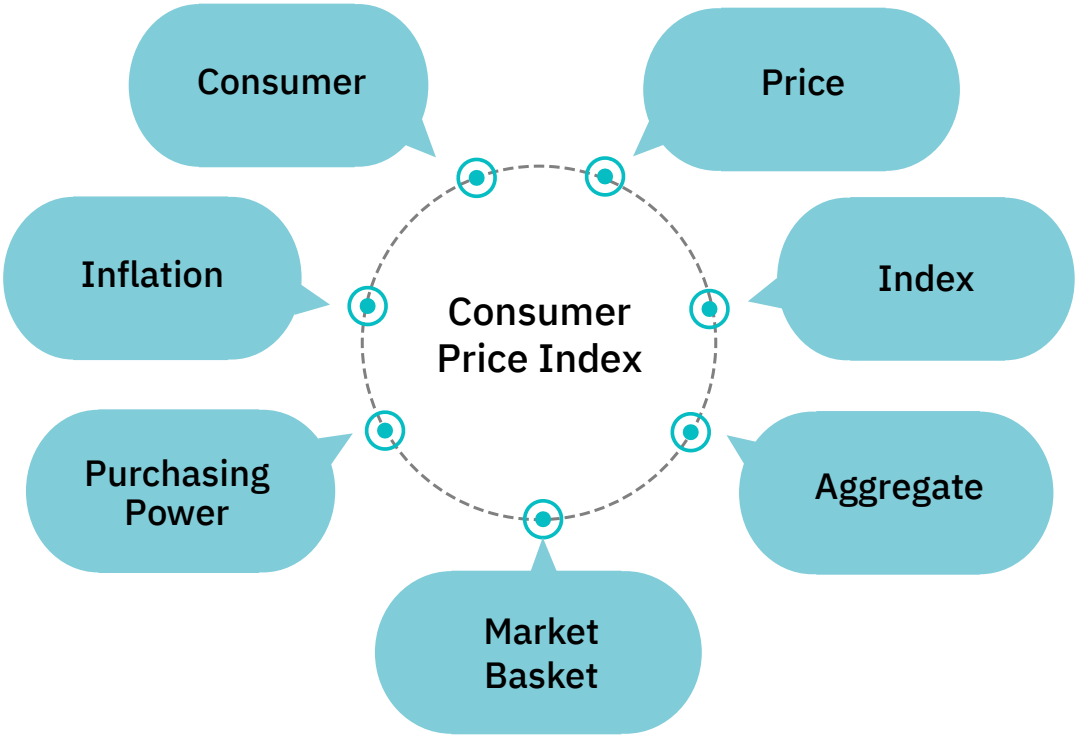
## Handout 3: Consumer Price Index Vocabulary




### Definitions

1. A person who buys goods and services to satisfy wants
2. A measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services
3. The amount a buyer must pay to purchase a good or service.
4. A measure of change in the value of items over time on a given date
5. A collection of many parts
6. A general, sustained upward movement of prices for goods and services in an economy
7. The amount of goods and services a unit of currency can buy
8. A selected group of consumer goods and services whose prices are tracked for calculating a consumer price index

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## Handout 4: Bureau of Labor Statistics (BLS) Shopper Checklist

Name: _____

Circle the name on your box from the list below:

| | |
|---|---|
| Food and Beverages | Housing |
| Apparel (Clothing) | Transportation |
| Medical Care | Recreation |
| Education and Communication | Other Goods and Services |

List the items in your box in the first column of the table and record the price of each item in the "Price January 2024" column of the table.

| Item | Price January 2024 | Price January 2022 | Price difference +/- |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

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## Handout 5: Previous Prices for Comparison

| Food and Beverages | |
|---|---|
| Item | Price January 2022 |
| 1 dozen large eggs | $3.50 |
| 1 pound 85% lean ground beef | $4.60 |
| 24 pack of 12-oz. Coke® | $9.50 |

| Medical Care | |
|---|---|
| Item | Price January 2022 |
| Children's eyeglasses Lens Crafters® | $159 |
| Coppertone® Sport 7 oz. SPF 20 | $8.50 |
| Band-Aid® variety pack 30 | $2.79 |

| Housing | |
|---|---|
| Item | Price January 2022 |
| Average rent per month— 2 bedroom/2 bath | $1,300 |
| Bed, dresser, and desk | $1,200 |
| Large dog bed | $55 |

| Recreation | |
|---|---|
| Item | Price January 2022 |
| 32-in. LG® Smart TV | $235 |
| Razor® scooter | $45 |
| Nike® training soccer ball | $25 |

| Apparel (Clothing) | |
|---|---|
| Item | Price January 2022 |
| Levi's® jeans | $65 |
| Chuck Taylor Converse All Stars® | $60 |
| Gap® denim jacket | $90 |

| Education and Communication | |
|---|---|
| Item | Price January 2022 |
| Postage stamp | $0.60 |
| Crayola® crayons 64-count box | $4.25 |
| Fiskars® 5-in. kid's scissors | $2.00 |

| Transportation | |
|---|---|
| Item | Price January 2022 |
| Regular gasoline | $2.90 |
| New Ford Escape S® | $25,500 |
| Round trip St. Louis to Orlando | $225 |
| 20-in. BMX® bike | $120 |

| Other Goods and Services | |
|---|---|
| Item | Price January 2022 |
| Haircut—Great Clips® | $17 |
| One-month basic cable | $70 |
| Small-sized dog grooming | $45 |

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# Handout 6: Role-Play Scenarios (page 1 of 2)

## Scenario 1

*Gas Prices*

**FRIEND 1**: Wow! It cost me $40 to fill up my tank just now instead of the $30 it would have cost me a few months ago.

**FRIEND 2**: Yes, I've noticed and the price of other goods like food and clothing are going up, too.

**FRIEND 3**: Well, it is more expensive to transport goods by truck when fuel prices go up. So, the price of goods goes up.

**FRIEND 1**: I noticed that the price of my haircut went up and eating out has gotten more expensive.

**FRIEND 2**: With gas prices rising, I'm going to change my vacation plans and have a "stay-cation" next week instead of driving out of town.

**FRIEND 3:** Maybe we should think about carpooling, and I think I'll start packing my lunch again.

## Scenario 2

*Movie Theater*

**TICKET SALESPERSON, to Customer**: That will be $12.50 each, so $25 please.

*Customer pretends to hand money to the ticket salesperson. Ticket salesperson pretends to hand over tickets.*

**TICKET SALESPERSON**: Thank you and enjoy the show.

**CUSTOMER, to Friend**: OK, the price of tickets has gone up. I used to be able to buy 2 tickets, a popcorn and 2 soft drinks for $35. But I don't have enough cash left to buy popcorn and soft drinks. If want them, you'll have to buy.

**FRIEND**: If we put our money together, we can buy one popcorn and one soft drink and share. It's not what we used to be able to buy, but it will have to do.

## Scenario 3

*Grocery Store*

**CUSTOMER**: Oh good, I see blueberries!

**PRODUCE WORKER**: Yes, we just got a new shipment.

**CUSTOMER**: Wow! They're $9.99 a box. That's twice as much as I paid the last time I bought them.

**PRODUCE WORKER**: Blueberries are no longer in season, so the price is higher.

**CUSTOMER**: The strawberries look good, and the price is much less and within my budget. I'll buy strawberries instead.

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## Handout 6: Role-Play Scenarios (page 2 of 2)

### Scenario 4

*Restaurant*

**SANDWICH SHOP OWNER**: Oh boy, we're going to have to print new menus.

**SANDWICH MAKER**: Why's that, boss?

**SANDWICH SHOP OWNER**: I have to raise the price of sandwiches by 50 cents each to cover my increased costs. I gave you and my other employees a raise to keep you working for me and not my competition. And the prices for bread, some cheeses, and many of the meats we use have increased. With the current menu prices, I won't earn enough to pay the bills. I'll have a bill for printing the new menus, too. I did the math, and if we keep selling the same number of sandwiches, I should be able to cover costs with the 50-cent increase.

**SANDWICH MAKER**: I'm excited to get a pay raise, but I didn't think about having to raise the price of sandwiches.

**SANDWICH SHOP OWNER**: There's no such thing as a free lunch! Somebody somewhere has to pay for it. Good thing you make great sandwiches!

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## Handout 7: Assessment

**Name:**_____

**Directions: Select the best answer to each of the following questions.**

1. The Consumer Price Index (CPI) is a:
   a. measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.
   b. measure of change in the value of items over time on a given date.
   c. general, sustained upward movement of prices for goods and services in an economy.
   d. selected group of consumer goods and services whose prices are tracked for calculating a consumer price index.

2. Inflation is a:
   a. measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.
   b. measure of change in the value of items over time on a given date.
   c. general, sustained upward movement of prices for goods and services in an economy.
   d. selected group of consumer goods and services whose prices are tracked for calculating a consumer price index.

3. A market basket is a:
   a. measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.
   b. measure of change in the value of items over time on a given date.
   c. general, sustained upward movement of prices for goods and services in an economy.
   d. selected group of consumer goods and services whose prices are tracked for calculating a consumer price index.

4. An index is a:
   a, measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.
   b. measure of change in the value of items over time on a given date.
   c. general, sustained upward movement of prices for goods and services in an economy.
   d. selected group of consumer goods and services whose prices are tracked for calculating a consumer price index.

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**Answer the following questions in complete sentences.**

5. Why do people care about inflation?

6. What is purchasing power?

7. How does inflation impact purchasing power?

8. Based on the skits you saw in class, give two examples of how people change their behavior as a result of inflation.

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# Standards and Benchmarks

## Voluntary National Content Standards in Economics

### Standard 11: Money and Inflation

- **Benchmarks: Grade 4**

  5. Inflation is an increase in most prices; deflation is a decrease in most prices.

- **Benchmarks: Grade 8**

  4. Inflation reduces the value of money.

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