

## 5: In Great Demand

## Based on the Wisconsin quarter reverse

## OBJECTIVE

Students will explain the meaning of supply and demand.


## MATERIALS

- 1 overhead transparency (or photocopy) of the Wisconsin quarter reverse
- 1 class map of the United States
- 1 farm crop (an ear of corn, a tomato, etc.) for each student in your class (real, plastic, or photographed)
- Envelopes
- Copies of the "Golden Dollar" page
- Chalk/white board
- Chalk or white board markers
- Copies of the "What's the Effect" worksheet
- Copies of the "Pizza Puzzler" worksheet



## PREPARATIONS

- Make an overhead transparency (or photocopy) of the Wisconsin quarter reverse.
- Make copies of the "Golden Dollar" page (the number of copies will vary depending on class size).
- Cut out the Golden Dollar images and place a different number of dollars in each envelope. Make sure that one envelope has more dollars than all other envelopes.
- Make copies of the "What's the Effect" worksheet (1 per student).
- Make copies of the "Pizza Puzzler" worksheet (1 per student).



## GROUPINGS

- Whole group
- Pairs


## CLASS TIME

One 45- to 60-minute session

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## CONNECTIONS

- Social Studies
- Language Arts
- Mathematics


## TERMS AND CONCEPTS

- Quarter
- Reverse (back)
- Supply
- Demand
- Profit
- Cost
- Price



## BACKGROUND KNOWLEDGE

Students should have a basic knowledge of:

- Goods and services
- Production
- Computation
- Scarcity
- Farm life



## STEPS

1. Describe the 50 State Quarters ${ }^{\circledR}$ Program for background information, if necessary, using the example of your own state, if available. Then display the transparency or photocopy of the Wisconsin quarter reverse. Locate Wisconsin on a classroom map. Note its position in relation to your school's location.
2. With the students, examine the design on this coin's reverse. Ask students to identify objects they recognize: a cow, cheese, and an ear of corn. Conduct a discussion about why the students believe Wisconsin chose to put these images on its quarter, and whether it is representative of the state as a whole. If the students feel that these designs are only representative of a portion of Wisconsin's population, why do they think that this design was selected to represent the whole of the state? Comments may relate to the idea that Wisconsin is well known for its dairy and farming industries, which are far reaching and touch people throughout the nation as well as the state.
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3. Ask the students to explain what takes place on a farm. Students should comment that farmers grow crops in order to sell.
4. Take out one item that would be grown on a farm and show it to your students.
5. Distribute an envelope filled with Golden Dollar images to each student.
6. Tell your students that the growing season was very dry this year, and the only crop that the farmers sent for you to sell was this one item.
7. Explain to the students that they need to pretend that they are grocery shopping and that they really want to eat the farm item with their dinner tonight. Everyone will have a chance to buy this item, but since you have only one, you will have to auction it off to the highest bidder.
8. Open the bidding at one dollar and allow your students to bid on it. See how high the bidding goes and sell it to the student with the highest bid.
9. Take out a bag that is filled with enough of the same crop that you would be able to sell one to each member of the class. Tell the class that a farm in another town had a really good season and they sent over all of these crops to sell. Tell them that there's enough for each student.
10. Explain that the students need to pretend that they are still really hungry and want to buy this crop. Everyone will once again have a chance to bid on this crop, but they can only purchase one.
11. Open the bidding at one dollar and allow the students to bid on it. See how high the bidding goes this time. Remind students that there's enough for everyone in the class (so the students shouldn't raise the bids).
12. Take a dollar from each student and give them one of the crops.
13. Make a T-chart on the board, writing the words "Supply" and "Demand" as the headers for each column. Based on their previous activity, ask the students what they believe supply and demand might be.
14. Ask the student who purchased the first crop for the higher price to explain to the class what happened when (s)he made his or her purchase.
15.As (s)he describes the event where there was only one crop available, write the word "low" in the supply column. As (s)he describes the event where the price rose, write the word "high" in the demand column.
15. Now ask one of the other students to explain what happened in the second purchase scenario.
17.As (s)he describes the event where there were many crops available, write the word "high" in the supply column. As (s)he describes the event where the price remained low, write the word "low" in the demand column.

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16. In pairs, students should discuss the chart on the board.
17. Distribute a "What's the Effect?" worksheet to each student. With a partner, students will complete numbers 1 and 2 on this worksheet. Individually, students will write the paragraph required at number 3 on this worksheet.
20.As a class, regroup and discuss the answers that the students wrote.
18. Collect these worksheets and assign the students the "Pizza Puzzler" worksheet for homework, as it will lead into a discussion about the effect of supply and demand on profit.


## ENRICHMENT/EXTENSIONS

- Based on the bonus question from the "Pizza Puzzler" worksheet, introduce students to the idea of sales as a way to generate more demand. This would also be a good opportunity to explore the effects of advertising on a company's sales.
- Study the effect of supply and demand by setting up a class simulation where students take on the roles of manufacturers, distributors (merchants), and consumers. The manufacturers will need to purchase supplies in order to make their product. They will sell this product to a distributor for a price, and the distributor will sell the product to the consumer for a higher price. Supply the consumers with scenario cards that will effect the price of the product that is for sale.
- Conduct a class survey to see how often the students consume certain products (such as pizza or candy). Have students draw conclusions about what might happen to their consumption of this product if prices rose by 10 percent, 20 percent, 50 percent, etc.



## DIFFERENTIATED LEARNING OPTION

Provide visuals and possibly simple texts to show students the process of supply and demand.

## CONNECTION TO WWW.USMINT.GOV/KIDS

Even the California Gold Rush was affected by supply and demand. Allow your students to explore what happened in California once gold was no longer a rarity by trying out the Social Studies Teacher Feature, "The Cost of Finding Gold" (www.usmint.gov/kids/ index.cfm?FileContents=/kids/teachers/TF_2002-09.cfm). To find it, visit the Teachers section of the United States Mint H.I.P. Pocket Change ${ }^{\mathrm{TM}}$ Web site and select Teacher Features. In the Teacher Feature Stockroom, you can locate this activity listed under Social Studies.

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## What's the Effect?

1. What does the word "supply" mean?
$\qquad$
$\qquad$
$\qquad$
$\qquad$
2. What does the word "demand" mean?
3. Write a paragraph describing what is happening in this diagram: SUPPLY ---> DEMAND ---> PRICE

## NAME

## Pizza Puzzler Worksheet

Pete decides to open a pizza parlor. Supplies to make one large pepperoni pizza cost him $\$ 2.00$. He sells each large pepperoni pizza for $\$ 5.00$.

1. If Pete started off with $\$ 30.00$, how many pizzas would he be able to make?
2. If he sold all of his pizzas, how much money would he have?
3. How much more money would he have than he started with?
4. How many pizzas could he make with that profit?
5. If he only sold three of his pizzas, how much money would he then have?
6. Would he have more or less money than he first started with?
7. If there were three pizza parlors on Pete's street, how would his prices be affected? $\qquad$
8. How would Pete's prices be affected if he owned the only pizza parlor in town?
9. How would Pete's prices change if the tomato crop was very poor and the price of tomatoes rose? $\qquad$

* Bonus: On the back of this page, list some different ways that Pete could raise his profits (and his demand).



