

# WHO GETS TO SEE THE GAME?

by Vickie Weiss (Michigan),  
Wanda Zubrzycka (Poland),  
Agung Waspodo (Indonesia),  
Christy Johnson (Washington)

## LESSON DESCRIPTION

Scarcity forces people to allocate goods and services in a variety of ways. In this lesson, the students use cost/benefit analysis to analyze various methods of allocation, first for tickets to a football game and then for organ transplants.

## AGE LEVEL

12-14 years old

## CONCEPTS

Allocation methods  
Cost/benefit analysis

## CONTENT STANDARD

**Standard 3** – Different methods can be used to allocate goods and services. People, acting individually or collectively through government, must choose which methods to use to allocate different kinds of goods and services.

## BENCHMARKS

- **Benchmark 2 for 4th Grade:** There are different ways to distribute goods and services (by prices, command, majority rule, contests, force, first-come-first-served, sharing equally, lottery, personal characteristics, and others), and there are advantages and disadvantages to each.

- **Benchmark 1 for 8th Grade:** Scarcity requires the use of some distribution method, whether the method is selected explicitly or not.

## OBJECTIVES

The students will:

- ◆ Identify various allocation methods.
- ◆ Compare the costs and benefits of various allocation methods.

- ◆ Explain why different methods of allocation are used.

## TIME REQUIRED

45-60 minutes

## MATERIALS

- Visual 1
- Enough copies of Activity 1, cut apart, to provide one card for each student
- Visual 2
- One copy of Activity 2 for each student
- One sticky-note for each student
- Visual 3
- One sign for each of the allocation methods (“First-come, First-Served,” “Auction,” “Lottery,” “Authority,” “Contest,” “Personal Characteristic”)
- Masking tape
- One copy of Activity 3 for each student

## PROCEDURE

1. Display Visual 1. Tell the students that the high-school football team is in the playoffs. There are 1,000 students at school. Hundreds of the students want to attend the playoff game, but only 100 tickets are available.

2. Ask the students what the economic problem is. *There are not enough tickets for everyone who wants one.* Explain that this is called scarcity. **Scarcity** is the condition of not being able to have all of the goods and services one wants.

3. Tell the students that they are going to explore methods to allocate the scarce tickets. To **allocate** means to decide who gets something or how something should be used.

4. Explain that there are many different methods that could be used to decide who will get the tickets. Distribute one card from Activity 1 to each student. Instruct the students to read the card. Divide the students into six groups, based on their card numbers.

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5. Explain that each group will develop a role-play to demonstrate the method of allocation described on its card. Explain the rules for developing and presenting the role-play as follows:

- The students may not say the word or definition on the card out-loud.
- Each group's role-play may not be longer than two minutes.
- The groups have only 10 minutes to prepare the role-play.

6. Allow 10 minutes for the groups to work. Observe the groups, clarify any questions and quietly ask specific groups the following while they are working:

- (For the "Personal Characteristic" group) Which trait will you use? *Answers will vary but could include height, hair color, and so on; make sure the group is using only one trait.*
- (For the "Contest" group) Which competition will you use? *Answers will vary but could include footrace, shoot baskets, best grades, highest jump, and so on.*
- (For the "First-Come-First-Served" group) How will you illustrate this method? *Stand in line*
- (For the "Auction" group) How will you illustrate this method? *The highest bidder gets the resource.*
- (For the "Lottery" group) How will you illustrate this method? *Answers will vary but could include drawing numbers, drawing names, and so on.*
- (For the "Authority" group) How will you illustrate this method? *Someone in a position of power allocates the scarce resource, and so on.*

7. When the groups have finished working, have them present their role-plays. Enforce the two-minute time limit. After each group finishes, ask the class to name the allocation method

illustrated in each role-play. Record the students' responses on the board. (NOTE: The groups may not use the specific term in question, but may use something similar.)

8. When all the groups have presented their role-plays, display Visual 2 and review the definitions and examples for each allocation method.

9. Distribute a copy of Activity 2 and a sticky-note to each student.

10. Allow several minutes for the students to read the Activity 2 chart. Tell the students to think about the ticket problem and rank the allocation methods by placing the numbers "1" through "6" in the column labeled "Initial Choice." Explain that "1" should be assigned to the allocation method the student thinks would be best for solving the ticket problem, "2" should be assigned to the next-best allocation method, and so on.

11. While the students work on completing the chart of Activity 2, tape the six allocation-method signs on a wall or along the top of the chalkboard. After the students complete the column "Initial Choice" on Activity 2, ask them to write their names on the sticky-note and place it under the sign for the allocation method they ranked as number-one.

12. Tell the students they will move into new groups. Tell students each group member should have a different symbol on his/her allocation methods card. This will allow each group to have a representative from each of the six methods ("Lottery," "Auction," "Contest," "Personal Characteristics," and "Price.") Direct students to create their groups.

13. Define **cost** as something that is unfavorable to a decision maker and **benefit** as something that is favorable to a decision maker. Explain that cost/benefit analysis involves

comparing the costs and benefits of the alternatives available and choosing the alternative that offers the greatest benefits relative to the costs. Ask the students to consider the following problem:

*Wanda received \$50 for her birthday. She can use this money to buy new jeans that she wants - the jeans that everyone else is wearing. She knows that they will look great on her, and she should be able to wear them for a while. But Wanda is going to a special training camp for swimmers at a state university this summer. The camp is quite rigorous and prestigious, and it should help Wanda improve her times for swim events. Her parents have agreed to pay the camp fee, but Wanda wants extra spending money. She could put the \$50 in her savings account to use later at camp. Her account earns some interest, so she would even have a little more than \$50 by the time camp rolls around.*

14. Ask each student to imagine that she or he is Wanda. Discuss the following with the class:

- A. What benefits does Wanda receive by purchasing the jeans? *She is able to wear them; she looks good; she has the jeans everyone else is wearing; they will last for a while; and so on.*
- B. What are the costs to Wanda of buying the jeans? *She gives up having the money to buy food, snacks, souvenirs from swim camp; she gives up the interest she would earn.*
- C. What benefits does Wanda receive by saving the money? *She earns interest; she is able to have spending money for various things at camp in the summer.*
- D. What are the costs to Wanda of saving the money? *She gives up having the jeans; looking like every one else and so on.*

15. Explain that the groups are going to analyze the costs and benefits of using the various methods of allocation to solve the ticket problem.

Tell the students to begin by having each member of their group read his or her card – the name of an allocation method, and its definition – to the rest of the group. When a student reads the name of an allocation method, the groups should discuss the costs and benefits of that method. Allow time for the groups to discuss the costs and benefits of each method.

16. Display Visual 3. Discuss the following questions with the class and record the students' answers on the Visual. Explain that the students may record information on their copies of Activity 2.

- A. What are the benefits of using the first-come, first-served method? *Answers will vary but could include "very fast," "once method begins the distribution process goes quickly," "people can decide if it is important enough to adjust their schedule to wait in line," and so on.*
- B. What are the costs of using the first-come, first-served method? *Answers will vary but could include "have to wait a long time," "those living far away are at a disadvantage," "harms those with a rigid schedule," "those who want the tickets the most may not get them," and so on.*
- C. What are the benefits of the lottery method? *Answers will vary but could include "random," "fair," "everyone has the same chance," and so on.*
- D. What are the costs of the lottery method? *Answers will vary but could include "takes a lot of time to set up," "some people aren't lucky," "those who want the tickets the most may not get them," and so on.*
- E. What are the benefits of the contest method? *Answers will vary but could include "best is recognized," "individuals have some control," and so on.*

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- F. What are the costs of the contest method? *Answers will vary but could include “discrimination against disabilities,” “those who want the tickets the most may not get them,” and so on.*
- G. What are the benefits of the auction method? *Answers will vary but could include “the people who are willing and able to pay the most for the tickets will get them,” “the process will go quickly,” and so on.*
- H. What are the costs of the auction method? *Answers will vary but could include “people who want the tickets the most may not be able to get them,” “won’t be fair to those who have less money,” and so on.*
- I. What are the benefits of the personal characteristic method? *Answers will vary but could include “those who have the characteristic have the opportunity to get the tickets.”*
- J. What are the costs of the personal characteristic method? *Answers will vary but could include “not fair,” “only a few people qualify,” and so on.*
- K. What are the benefits of the authority method? *Answers will vary but could include “fast,” “inexpensive,” and so on.*
- L. What are the costs of the authority method? *Answers will vary but could include “not fair,” “subjective,” and so on.*

17. Tell the students that using what they learned through their discussion, they will work in their groups to rank the allocation methods. Again, they should rank the best method as “1” and so forth. The students should enter the group ranking in the column labeled “Group Ranking” on Activity 2. Allow about 10 minutes for the students to work, then ask each group to report its decision. Discuss the following:

- A. How many of your initial individual rankings for the best allocation method differ from the group ranking of the best method (Ask students to raise hands)? Why? *Answers will vary.*
- B. Did the group discussion cause you to change your initial ranking? *Answers will vary.* Why? *Answers will vary but could include “more information,” “better understand the costs and benefits of each method,” “more thoughts,” “more time for thinking,” and so on.*
- C. How does the specific situation determine the type of allocation method people use? *Answers will vary but could include that in different situations the costs and benefits are different, so the allocation choice could be different.*

18. Tell the students that if they would like to change the method that they would rank number 1, they may move their sticky-note from its initial location and place it under the sign for the allocation method they now would rank number 1. Ask students to explain why they changed their ranking.

### CLOSURE

19. Review the following:

- A. Why must people make allocation decisions? *Because of scarcity*
- B. Name the six methods of allocation. *First-come-first-served, authority, auction, lottery, contest, personal characteristic*
- C. What are the benefits and costs of each method of allocation?
- First-come, first-served: *Benefits – very fast, once method begins the distribution process goes quickly, people can decide if it is important enough to adjust their schedule to wait in line, and so*

*on; Costs – have to wait a long time, those living far away are at a disadvantage, harms those with a rigid schedule, those who want the tickets the most may not get them, and so on.*

- Lottery: *Benefits – random, fair, everyone has the same chance, and so on; Costs – takes a lot of time to set up, some people aren't lucky, those who want the tickets the most may not get them, and so on.*
  - Contest: *Benefits – best is recognized, individuals have some control, and so on; Costs – discrimination against disabilities, those who want the tickets the most may not get them, and so on.*
  - Auction: *Benefits – the people who are willing and able to pay the most for the tickets will get them, the process will go quickly, and so on; Costs – people who want the tickets the most may not be able to get them, won't be fair to those who have less money, and so on.*
  - Personal characteristic: *Benefits – those who have the characteristic have the opportunity to get the tickets; Costs – not fair, only a few people qualify, and so on.*
  - Authority: *Benefits – fast, inexpensive, and so on; Costs – not fair, subjective, and so on.*
- D. Why isn't a single allocation method always the best? *It depends on the situation and what is being allocated.*
- E. How can people decide which allocation method to use? *By using a cost/benefit analysis*
- F. What are benefits? *Things that are*

- favorable to a decision maker*
- G. What are costs? *Things that are unfavorable to a decision maker*

## ASSESSMENT

Distribute a copy of Activity 3 to each student. Tell the students to read the scenario and complete the questions.

Visual 1

**Who Gets to See the Game?**

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**TEAM WINS, LAST  
PLAYOFF SPOT!**

**ONLY 100 TICKETS  
AVAILABLE!**

**HUNDREDS OF  
STUDENTS WANT TO SEE  
THE GAME!**

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## Visual 2

### Allocation Methods

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- ◆ **First-Come, First-Served**
  - People who arrive first, sign up first and so on are the ones who receive the resources, goods or services first. For example, people who are first in line for concert tickets get to buy tickets first.
  
- ◆ **Lottery**
  - Everyone's name is placed in a hat, or everyone gets a ticket, and a winning ticket is drawn - these are two examples of the lottery method.
  
- ◆ **Contest**
  - The winner of the 100-meter race wins the prize, the fastest swimmer wins a medal, the one who spells the most words correctly wins an award, and so on. All of these involve allocating based on some type of contest.
  
- ◆ **Auction**
  - The person who bids the most on e-Bay gets the item. The person who can afford a car, a house, clothing, is able to buy it. Many goods, services and resources are allocated by auction or are allocated based on price.
  
- ◆ **Personal Characteristic**
  - The tallest people get chosen first for the basketball team. The people who run the fastest are chosen to participate in track events. Sometimes allocation is based on personal characteristics.
  
- ◆ **Authority**
  - The teacher decides who gets to use the computer, when they may use it and for how long. The principal decides which classes get to use the gym, at what time, and for how long. Your parents decide when you can watch television, what you can watch and how long you can watch. Sometimes a person in authority or a small group of people decide how to allocate something.

# Visual 3

## Evaluation of Allocation Methods

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Method of Allocation	My Initial Choice	Group Choice	Who Gains? (costs)	Who Loses? (benefits)
First-Come, First-Served				
Lottery				
Auction				
Personal Characteristic				
Contest				
Authority				

## Activity 1

# Allocation Methods Cards

<p>1. First-Come, First-Served:</p> <p>Scarce resources are allocated by distributing to those arriving first.</p> <p style="text-align: center;">*</p>	<p>2. Lottery:</p> <p>Scarce resources are allocated by randomly drawing numbers corresponding with a name.</p> <p style="text-align: center;">&amp;</p>
<p>3. Contest:</p> <p>Scarce resources are allocated to the winner of any competition.</p> <p style="text-align: center;">%</p>	<p>4. Auction:</p> <p>Scarce resources are allocated to the highest bidder.</p> <p style="text-align: center;">#</p>
<p>5. Personal Characteristic:</p> <p>Scarce resources are allocated based on an arbitrary trait.</p> <p>(use only one trait in the role-play)</p> <p style="text-align: center;">@</p>	<p>5. Authority:</p> <p>Scarce resources are allocated by a person in a position of power.</p> <p style="text-align: center;">!</p>

## Activity 2

### Evaluation of Allocation Methods

Method of Allocation	My Initial Choice	Group Choice	Who Gains? (costs)	Who Loses? (benefits)
First-Come, First-Served				
Lottery				
Auction				
Personal Characteristic				
Contest				
Authority				

Name: \_\_\_\_\_

Directions for filling out the table: Each cost and benefit cell must be filled at least with one comment.

Before cost/benefit analysis my choice was \_\_\_\_\_

After cost/benefit analysis my choice is \_\_\_\_\_

Explain why you did or did not change method of allocation \_\_\_\_\_

## Activity 3

### Assessment

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One of your classmates is seriously ill. In order for her to get well, she needs an organ transplant. There is a very long waiting list. On the waiting list is also a famous basketball player, a father with three children, and a homeless person. All are seriously ill and in need of an organ transplant. If they do not receive an organ within one year, they will die.

Currently, there are shortages of organs, and the list of potential recipients is very long. Over 92,956 Americans are waiting for some sort of transplant. [1]

1. First-come, first-served is the current allocation method. Is this fair? Why or why not?
2. Who do you think should receive the organ?

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Design an allocation system that will guarantee this person gets the organ.

[1] Data from [www.optn.org](http://www.optn.org) <<http://www.optn.org>>.

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