INTRODUCTION
Often decisions result in trading off some of one thing to get some of another. This lesson introduces the idea of trade-offs and provides practice in analyzing options before making decisions.

ECONOMIC CONCEPTS
Choice Opportunity cost Alternatives Trade-offs

RELATED CONTENT AREAS
- Mathematics
- Charts and graphs
- Use of calculators

OBJECTIVES
- Define opportunity cost.
- Identify alternatives.
- Explain that a trade-off involves giving up some of one thing to get some of another.
- Analyze trade-offs.

LESSON DESCRIPTION
After reading about a problem, students identify alternative solutions, trade-offs made in choosing each alternative, and the opportunity cost of selecting each option. Students describe trade-offs and create a graphic to represent alternatives and trade-offs.

TIME REQUIRED
- Two class periods

NATIONAL STANDARDS

National Standard Number: 1
Productive resources are limited. Therefore, people can not have all the goods and services they want; as a result, they must choose some things and give up others.

National Standard Number: 2
Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something; few choices are “all or nothing” decisions.

National Standard Number: 4
People respond predictably to positive and negative incentives.

MATERIALS
• Visual 1, *Basketball Dilemma*, and Visual 2, *Basketball Options* (see below)
• Activity 1
• Calculator for every 2/3 students
• Overhead pens
• Markers for each group
• Newspaper ads for food and other items

**PROCEDURE**

1. Explain that sometimes decisions result in giving up some of one thing to get some of another thing. This is called a trade-off.

2. Display transparency of Visual 1 and ask students to identify the problem in this situation. (The main gym is available only for 8 hours but the students will play 20 basketball games.) Explain there are two obvious choices. The students could use all 8 hours for girls' games or all 8 hours for boys' games.

3. Ask students to identify other options. List these on the board.
   (4 hours for girls, 4 hours for boys; 6 hours for girls, 6 hours for boys; 2 hours for boys, 2 hours for girls; 3 hours for boys, 5 hours for girls; 3 hours for girls, 5 hours for boys; and so on.) Select a student and discuss:
   - If you were making this decision, what option would you choose? (Answers will vary but use one student's answer as an example.)
   - What would your second choice be? What do we call this second choice? (opportunity cost)
   - Does choosing this option result in any trade-offs? (Yes, you give up being able to play some boys' (girls') games in order to play some girls' (boys') games.)


5. Divide the class into groups of 2/3 students. Distribute calculators and markers to each group. Ask students to illustrate as many options as they can and determine the percent of time in the large gym allotted to each group. They may use squares, circles, or rectangles

6. Distribute a copy of Activity 1 to each student. Assign each group one of the situations on the sheet. Instruct the group to determine a list of possible options, and assign time or money values.

7. Ask students to use the back side of Activity 1 to draw pie charts or graphs representing each option they have described. Instruct them to identify the choice they would make, their opportunity cost, and the trade-offs resulting from their decision.

**CLOSURE**

1. Ask groups to tell which situation they were assigned, identify options they listed, their decision and opportunity cost, and the trade-offs that resulted.
**EVALUATION**

1. Instruct groups to write their own decision situations that have a variety of possible outcomes. When paragraphs are complete, have them trade with another group, calculate percentages, and develop a graph. Explain that depending on the options, they may wish to use something other than a pie chart.

2. Ask students to answer the following questions in their Economics Role Journal regarding the role of lifelong decision maker.

   - Is this one of your roles now? If so, how?
   - How will you fill this role in the future?
   - How will being a good decision maker benefit you?

**EXTENSION**

1. Ask students to look for pie charts in news magazines and newspapers. Instruct them to translate one of their decision graphs into another visual format (such as a bar graph).

2. Instruct students to collect pictures or headlines from newspapers that describe local economic decisions. Students identify the trade-offs in these decisions and develop a presentation that identifies the pros and cons of each alternative and the decision/trade-off involved. They may use visuals in their presentations.
Latoya and Jeff were asked by their basketball coaches to help schedule the intramural tournament at their middle school. The school has two gyms in which games can be played but only the main gym has bleachers and a concession stand.

The girls will play 9 games and the boys will play 11 games. The games are 50 minutes long with a 10 minute break between games. The main gym is available for 8 hours. The other smaller gym will be used for the remaining games.

The coaches asked Latoya and Jeff to list as many scheduling options as possible for the large gym. List as many options as you can for scheduling the main gym.
Key:
G G G G G girls' game
B B B B B boys' game

4 hours = 1/2 = 50% for boys' games
4 hours = 1/2 = 50% for girls' games

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2 hours = 1/4 = 25% for boys' games
6 hours = 3/4 = 75% for girls' games

ACTIVITY 1: Give and Take
From UNIT 1: LESSON 2, Middle School Economics, © Council for Economic Education, New York, NY

OPTIONS

NAME: _____________________________

Analyze the following situations and list the options available to the individuals involved. When necessary, make up an exact number of hours or dollar amounts to fit the situation. (For example, cost of food or other items, amount of space, hours of time.) Based on your numbers, calculate the percentages for each option.

1. Maria received $15 from her aunt for her birthday and decided to go to the mall to look over her choices. After visiting several stores, she has decided she could purchase a CD of her favorite band, candy from the jellybean store, new pens and markers, or some food from the food court. Use newspaper ads as
well as your own experience to assign prices to these items to determine Maria's options.

1. Doug planned to go skate boarding this afternoon with his friend Rick at 1:00. He has to be home to help his mother prepare dinner at 5:00. An hour ago, he was asked to mow the neighbor's lawn. The neighbor will pay extra if Doug will do the job this afternoon. What are Doug's options?

1. Sheena is trying out for the basketball team at school. She has to be able to make free throws and three-point shots. She has three hours to practice this afternoon. How much time should she spend practicing each skill? What are her options?

1. Randy and Larry are in charge of the refreshments for the party after the class play. Their budget for snack food is $20. They are considering popcorn, pretzels, chips, nuts, and nachos. Use newspaper ads and your own experience to assign prices to these items. What are their options?

1. Luis has an English final tomorrow and has only two hours to study this evening. He knows that spelling words will be on the final but he also knows there will be questions covering the rules of grammar and punctuation. How can he plan his study time?

1. Sally is attending a scout camp in the mountains for a week. The campers will be hiking, camping, and horseback riding. They also have certain jobs they must do each day and special projects they must complete. They have only two hours during each of the four days to schedule hiking camping and horseback riding. Each activity must be scheduled in 30 minute blocks. Sally wants to spend some time doing each of these activities. What are her options?