BIRKA: THE STRATEGIC TRADING GAME

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Audience: High school and college economics students

Time required: Each game takes about 10 minutes to play and score. Allow at least one class period to introduce the game.

NCEE Standards: scarcity, marginal cost & benefit, allocation of goods & services, gains from trade

Summary: In this strategic trading game, students assume the role of Vikings who have returned to the medieval outpost of Birka to trade loot from villages they've plundered. Playing cards represent the loot--spades, hearts, diamonds, and clubs. To play effectively, students must use **marginal analysis** to determine whether prospective trades will benefit them, probe constantly for mutually beneficial exchanges that remain to be exploited, and bid more for cards that are relatively scarce. Birka also can be used to conduct several brief experiments about **trade**, **equilibrium**, **efficiency**, **the costs of government regulation and marketing tactics**. Birka is also an ideal activity for high school teachers who wish to occupy small groups of students productively for short periods of time, since each game can be played in only ten minutes with as few as four students.

For more information: Alden, Lori. 2005. Birka: A Trading Game for Economics Students. *The Social Studies* 96(4): 178-183.

http://www.econoclass.com/birka.html

To summarize:

- Set up groups of 4-6 (4 players may be a little more difficult)
- Each student gets 14 cards.
- Only the suit matters, not the rank (A-K-Q, etc.)
- The object of the game is to trade to get the highest total points.
- The scoring sheets tell how much each card is worth. The first card of each suit is worth more than the second, the second is worth more than the third, etc.
- The role of "buyer" rotates twice around the table in a game.
- The buyer begins by making a request for one or more specific cards (e.g., "One heart.") Requests can't change during the buyer's turn.
- After making a request, the buyer lays one or more cards (a bid) on the table.
- The buyer must trade with the first player to lay the requested card or cards on the bid.
- If no players accept the bid, the buyer may add more cards to it.

A buyer's turn is over when he or she passes or withdraws the bid, or when a bid has been accepted.

TEACHING POINTS

Point out that the scoring sheets are consistent with the **law of diminishing marginal benefits**, in that Viking traders are assumed to value the first unit of a good more than the second, the second more than the third, and so on.

Sellers in competitive markets must worry constantly about losing business to competitors. This gives them an incentive to keep prices low for buyers.

Once you've decided that a trade is advantageous, you often face another kind of tradeoff: whether to trade now for a certain marginal gain or to reject the trade in hopes of getting a larger marginal gain in the future.

Scoring Sheet for Birka

The schedule on the left-hand side of the table shows the value of any one card in your hand. Observe that the value of a card depends only on the number of cards you have in that suit—the rank (A-K-Q-J-10-9-8-7-6-5-4-3-2) of the cards is ignored. If you have three hearts, for example, the value of your third heart is 25. The schedule on the right-hand side shows the total value of all of the cards you have in a given suit. Three hearts are worth 245 points, which is equal to the value of the first heart (150) plus the second heart (70) plus the third heart (25).

Marginal value of each card in each suit Points	**Total value of the cards in each suit** Points
1st ♣ or ♦ or ♥ or ♠ 150	1 ♣ or ♦ or ♥ or ♠ 150
2nd ♣ or ♦ or ♥ or ♠ 70	2 ♣s or ♦s or ♥s or ♠s 220
3rd ♣ or ♦ or ♥ or ♠ 25	3 ♣s or ♦s or ♥s or ♠s 245
4th ♣ or ♦ or ♥ or ♠ 10	4 ♣s or ♦s or ♥s or ♠s 255
5th ♣ or ♦ or ♥ or ♠ 7	5 ♣s or ♦s or ♥s or ♠s 262
6th ♣ or ♦ or ♥ or ♠ 4	6 ♣s or ♦s or ♥s or ♠s 266
7th ♣ or ♦ or ♥ or ♠ 2	7 ♣s or ♦s or ♥s or ♠s 268
8th ♣ or ♦ or ♥ or ♠ 1	8 ♣s or ♦s or ♥s or ♠s 269
All additional ♣ or ♦ or ♥ or ♠ are worth 0 points.	

When the game ends, you can figure out the value of your hand by summing the total values of the cards in each suit. For example, if you have 4 cards in each of two suits and 3 cards in each of two suits (let's call it a 4-4-3-3 hand), your total score is 255 + 255 + 245 + 245 = 1,000. The following table shows scores for some of the most common hands.

5-4-4-4: 1027 points	4-3-3-3: 990 points	3-3-3-2: 955 points	5-5-4-1: 929 points
4-4-4-4: 1020 points	6-4-3-2: 986 points	4-4-2-2: 950 points	6-4-4-1: 926 points
5-4-4-3: 1017 points	4-4-4-2: 985 points	5-3-2-2: 947 points	6-5-3-1: 923 points
6-4-3-3: 1011 points	5-4-3-2: 982 points	4-3-2-2: 940 points	5-4-4-1: 922 points
4-4-4-3: 1010 points	3-3-3-3: 980 points	3-3-2-2: 930 points	6-4-3-1: 916 points
5-4-3-3: 1007 points	6-3-3-2: 976 points	6-4-2-2: 961 points	4-4-4-1: 915 points
4-4-3-3: 1000 points	4-4-3-2: 975 points	5-4-2-2: 957 points	5-4-3-1: 912 points
5-3-3-3: 997 points	4-3-3-2: 965 points	5-5-5-1: 936 points	6-3-3-1: 906 points
6-5-3-2: 993 points	5-5-2-2: 964 points	6-5-4-1: 933 points	4-4-3-1: 905 points

The player with the highest score wins the game. If several games are played, the player with the highest average score is declared the overall winner.