

# Unit 1

## Thinking Economically

### Lesson 1A:

## The Wealth Game—Factors for Success

### Rule 1: Think before you act.

Personal finance is largely about making decisions. Making good decisions involves determining your options, evaluating those options based on what is important to you, considering trade-offs (“weighing the gain and the pain”), and understanding that all decisions involve an opportunity cost. The lessons in Unit 1 introduce this process, which will be used in many of the *Making Personal Finance Decisions* units.

### Lesson Description

Students play “The Wealth Game” (based on “Market Exchange and Wealth Distribution: A Classroom Simulation” by Robert B. Williams, *Journal of Economic Education*, Fall 1993). Students are given an initial set of colored beads with defined values that determine their wealth in one of three categories: poor, middle class, or rich. Their task is to increase their wealth by trading their beads with other students. Individual student outcomes of the game are discussed in terms of the four primary determinants of wealth: natural abilities, effort, motivation, and luck.

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### Standards and Benchmarks (see page 8)

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### Grade Level

9-12

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### Concept

Determinants of wealth: natural abilities, effort, motivation, and luck

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### Compelling Question

How do personal characteristics and skills affect a person’s financial wealth?

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### Making Personal Finance Decisions

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## Objective

Students will be able to describe personal characteristics and skills important for financial success.

## Materials

- 430 beads (for a class of 30) in 5 different colors and amounts: 140 orange, 120 blue, 90 yellow, 50 green, and 30 red (Other colors may be substituted, but note that these colors are the ones listed on Handout 1.)
- 30 plastic sandwich/snack bags
- Large opaque bag (e.g., a paper grocery bag)
- Handout 1A.1: The Wealth Game, one copy for each student
- Handout 1A.2: Assessment, one copy for each student
- Optional: small prizes for winners in three categories

## Time Required

45 minutes

## Preparation

Before class, place the colored beads in small plastic bags according to the table below. Plastic bags allow the students to easily see what they have without spilling. Create “Poor” bags for one-third of the class, “Middle-class” bags for one-third of the class, and “Rich” bags for one-third of the class.

**(Teacher note:** *Other distributions could be used to demonstrate the effect of different wealth distributions.*) Place the prepared plastic bags into a larger bag that students cannot see through (such as a paper grocery bag).

Initial Wealth			
Color	Poor	Middle class	Rich
Orange	5	5	4
Blue	2	5	5
Yellow	2	2	5
Green	1	2	2
Red	0	1	2

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## Procedure

1. Tell the class they are going to play a game called “The Wealth Game.” Each student will receive a bag of beads that represents their wealth. The goal of the game is to increase their wealth by trading beads with other students in the room.
2. Have students randomly select a plastic bag of beads from the larger bag.
3. Distribute a copy of *Handout 1A.1: The Wealth Game* to each student. Explain that the handout describes how to calculate the total value of their beads. Note that the value depends not only on the number of each color of beads they have but also on the number of complete sets of three they have. (OPTIONAL: Show PowerPoint Slide 3, a chart of the following wealth-count example.) Use the following example to be sure students understand the scoring system:
  - Suppose you have 11 Blue beads and 2 Red beads. On the “Blue” line you write 11 under “Number.”
  - Since you have *three* complete sets of three Blue beads (one short of having four), for Blue, you circle the “1” and the “2” and the “3” under “Sets of three.”
  - You then add the numbers circled under “Sets of Three” and write the sum under “Bonus.” In this case, the Bonus is 6 (1 + 2 + 3).
  - You then add the number to the Bonus and write the sum under “Total.” In this case it is 17 (11 blue beads + 6 bonus points).
  - Since the value of Blue beads is 2, you multiply 17 by 2. You then write the product under “Points.” In this case, it is 34.
  - For the Red beads, you write 2 under “Number.” Since there are no complete sets of three, the Bonus would be 0 and the Total would be just 2 (2 + 0).
  - Since the value of a Red bead is 10, you multiply 10 by 2. You then write 20 under “Points.”
  - You then add the points from the Blue and Red beads and write the sum on the “Total Wealth” line. In this case, Total Wealth is 54 (34 + 20).

**(Teacher note:** *This system is a bit complicated by design to illustrate the effects of abilities and effort.*)
4. Have students calculate their initial wealth. They should have one of three totals: 25, 50, or 75 points. Go around the room and quickly check. If any students have another value, help them recalculate. (OPTIONAL: Show Slides 4-6, the poor, middle-class, and rich wealth counts, respectively, to allow students to check their work.) NOTE: Some students will have trouble with the necessary calculations, but it is important for them to start with the correct value.
5. Explain the game:
  - Their initial wealth was essentially based on luck (they drew from a bag).
  - There are three categories of wealth: poor (25 points), middle class (50 points), and rich (75 points).

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- The goal of the game is to increase their wealth points by trading with other students in the room.
  - The scoring system is based not only on bead color but also how many sets of three they have.
  - They may trade with anyone in the room and can make any type of trade (any number of beads for any number of beads).
  - They are competing, however, against *only* the students in their own wealth category, so there will be three winners—one in each category.
6. Allow students 5 to 10 minutes for trading.
  7. Stop trading. (OPTIONAL: Show Slide 7, a post-trading wealth-count example.) Have students determine their Round 1 Wealth (the value of their beads) on Handout 1A.1. Have students exchange their sheets and bags with another student to “audit” the results. Most students should have increased the value of their beads. If not, it means they made a trade that actually made them poorer. Note that since all trades are voluntary, both traders should have gained from the trading.
  8. Resume trading for another 5 to 10 minutes. (Option: Have just one trading round. The advantage of stopping in the middle is that it allows some students a moment to think about what they have done and need to do to increase their wealth.)
  9. Stop trading and have students determine their Round 2 Wealth on Handout 1A.1. Again have students exchange sheets and bags to audit each other’s results.
  10. Have each student in each wealth group (poor, middle class, and rich) report his or her final wealth. Determine who in each wealth class increased the value of his or her bag the most. (Optional: Award prizes to those students. Most students will have increased the value of their beads, some to the next wealth category. Those initially rich will have likely increased the value of their beads by both the largest absolute and relative amount, where the relative amount is the percentage change.)
  11. Discuss the four most important factors in determining how much a student increased his or her wealth:
    - How was **luck** involved? (*Luck was involved in the initial wealth and finding the right trading partners.*)
    - How were **natural abilities** involved? (*Natural abilities, such as quickly figuring out which trades were beneficial and bargaining/negotiating skills, vary and some students likely have more natural abilities than others.*)
    - How was **effort** involved? (*Effort to figure things out, find trades, and keep playing had an effect on the outcomes.*)

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- How was **motivation** involved? (*The desire to improve their position, win a prize, and succeed likely drove some students to increase their wealth.*)

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## Closure

12. Explain that these exact same factors will be important in the students' financial success. They are the basic **determinants of wealth**. While luck will play a role (being born into a wealthy family/nation or having the right connections to land a job), they can still be successful by acquiring education and training (which increases their skills), putting forth their best efforts (studying hard and working hard), and staying motivated (not giving up and not settling for less than they want).

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## Assessment

13. Display the chart "Earnings and unemployment rates by educational attainment" at [http://www.bls.gov/emp/ep\\_chart\\_001.htm](http://www.bls.gov/emp/ep_chart_001.htm). Explain that one of the determinants of income and wealth is level of education, which includes a combination of some of the determinants of wealth—natural abilities, effort, and motivation. Although pursuing education beyond high school can be a major expense, it can also pay off. Review the chart.
14. Distribute a copy of *Handout 1A.2: Assessment* to each student and allow time for students to work (or assign as homework).

### **Handout 1A.2: Assessment—Answer Key**

**Directions:** Write paragraphs to answer each of the following questions:

- What is the general relationship between education, unemployment, and income? How does this relationship reflect the basic determinants of wealth—luck, natural abilities, effort, and motivation—discussed in the lesson? (*Answers will vary but may be similar to the following: Generally speaking, as a person's level of education increases, so does income. And, the unemployment rate tends to be lower for those with higher levels of education. People with higher levels of educational attainment will likely earn a higher income and have an easier time finding a job. The basic determinants of wealth—luck, natural abilities, effort, and motivation—contribute to a student's ability to earn a college degree and to succeed as an employee or business owner. For example, a talented student who is motivated and works hard will likely excel in college, and those same characteristics will likely lead to a successful career after graduation.*)
- Why might college be a worthwhile investment even after accounting for the cost? (*Answers will vary but may be similar to the following: College is expensive. However, the higher income earned over an entire career [perhaps 40 years or more] by those with more education and training will likely far exceed the cost of going to college. In this way, education can be seen as an investment—the money you pay up front may yield higher income in the future.*)

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**Handout 1A.1: The Wealth Game** Name: \_\_\_\_\_

The goal of the game is to increase your wealth by trading your beads with other students in the room. Your initial wealth will be poor (25 points), middle class (50 points), or rich (75 points).

**Directions for Determining the Total Value of Your Beads**

1. Count the number of beads of each color and write each total in the “Number” column.
2. Count the number of complete sets of three of each color and circle a number for each set under “Sets of Three.” (For example, if you have three complete sets of three, you would circle “1,” “2,” and “3.”)
3. Add the circled numbers for each color and enter the sums in the “Bonus” column.
4. Add the “Number” and “Bonus” for each color and enter the sums in the “Total” column.
5. Multiply the “Total” by “Value” for each color and enter the products in the “Points” column.
6. Finally, add all of the “Points” and enter the sum on the “Total Wealth” line.

**Wealth Category:** \_\_\_\_\_

Initial Wealth						
Color	Number	Sets of Three	Bonus	Total	Value	Points
Orange		1 2 3 4 5			× 1	=
Blue		1 2 3 4 5			× 2	=
Yellow		1 2 3 4 5			× 4	=
Green		1 2 3 4 5			× 7	=
Red		1 2 3 4 5			× 10	=
					<b>Total Wealth</b>	=

Round 1 Wealth						
Color	Number	Sets of Three	Bonus	Total	Value	Points
Orange		1 2 3 4 5			× 1	=
Blue		1 2 3 4 5			× 2	=
Yellow		1 2 3 4 5			× 4	=
Green		1 2 3 4 5			× 7	=
Red		1 2 3 4 5			× 10	=
					<b>Total Wealth</b>	=

Round 2 Wealth						
Color	Number	Sets of Three	Bonus	Total	Value	Points
Orange		1 2 3 4 5			× 1	=
Blue		1 2 3 4 5			× 2	=
Yellow		1 2 3 4 5			× 4	=
Green		1 2 3 4 5			× 7	=
Red		1 2 3 4 5			× 10	=
					<b>Total Wealth</b>	=

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## Standards and Benchmarks

### Voluntary National Content Standards in Economics

**Standard 13: Income.** Income for most people is determined by the market value of the productive resources they sell. What workers earn primarily depends on the market value of what they produce.

- **Benchmarks: Grade 8**
  4. More productive workers are likely to be of greater value to employers and earn higher wages than less productive workers.
  5. Peoples' incomes, in part, reflect choices they have made about education, training, skill development, and careers. People with few skills are more likely to be poor.
- **Benchmark: Grade 12**
  3. The hope of achieving wealth can affect productivity by energizing people to work harder, while the hopelessness of escaping poverty can discourage people from trying.

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