

FINANCIAL FUNDAMENTALS\$ FROM THE FED

Invest In Yourself



A stylized logo for the 100th anniversary of the Federal Reserve System, consisting of a thick, curved line that starts as a solid green bar and ends as a brushstroke.

100 YEARS
FEDERAL RESERVE SYSTEM

Lesson Description

Students are divided into groups to produce name tents. Each of four groups in the classroom produce name tents in a different way to highlight different levels of human capital. They identify ways in which people invest in their human capital. Students analyze unemployment, educational attainment, and median weekly income data for 2011. They work with a partner to analyze the data and write sentences to describe relationships among the variables. As an assessment, students create graphs or charts to illustrate the unemployment, educational attainment and income data. They also use the *Occupational Outlook Handbook* to identify a possible career and the type of investments in human capital required to obtain that occupation.

Concepts

Human capital
Investment in human capital

Objectives

Students will:

- Define human capital and investment in human capital.
- Give examples of investment in human capital.
- Describe the relationship between a person's level of education and income-earning potential.
- Describe the relationship between educational attainment and percent unemployment.

Common Core Standards

Grades 6-12 Literacy in History/Social Studies & Technical Subjects
English Language Arts Standards, History/Social Studies, Grades 6-8 and 9-12

- **Craft and Structure**
- **Integration of Knowledge and Ideas**
- **Craft and Structure**

Content Standards

National Standards in Personal Financial Literacy

- **Standard 1:** Earning Income

National Standards in Economics

- **Standard 13:** Income
- **Standard 15:** Economic Growth

Time Required

45 minutes

Materials

- One sheet of chart paper for each pair of students
- Two sheets of light-colored construction paper per student plus one sheet for the teacher
- One dark-colored marker per student
- One copy of Handout 1 for each student
- One sheet of chart paper for each pair of students

Procedures

1. Tell students that they will create name tents for display on their desks for the day.
2. Demonstrate how to produce a name tent as follows.
 - Fold the piece of construction paper in half, shorter edges (8") together.
 - Crease the center fold. The folded paper should measure 8" x 5.5".
 - Open the paper to 8" x 11".
 - Fold the bottom 8" edge to the middle crease. Crease the fold.
 - Open the paper to 8" x 11".
 - Fold the top 8" edge to the middle crease. Crease the fold.
 - The paper should now have four sections each measuring approximately 2.75" x 8".
 - Starting from one end of the paper, count down three rectangles. Print your first name in large letters in the rectangle.
 - Turn the paper upside-down. Again count down three rectangles and print your first name in large letters in the rectangle.
 - Fold the paper to create a tent with the name displayed on both sides.
3. Divide the students into four groups. Explain that each group will have different rules for folding name tents. Describe the rules for each group as follows.
 - Group 1: Each of you will remain seated to produce your own name tent, using only one hand, your nondominant hand—that is, the hand with which you do not write—to produce the name tent. You must keep your dominant hand behind your back.

- Group 2: Each of you will remain seated to produce your own name tent, using only one hand, your dominant hand—that is, the hand with which you write—to produce the name tent. You must keep your nondominant hand behind your back.
 - Group 3: Each of you will remain seated to produce your own name tent, using both hands.
 - Group 4: Each of you will produce your own name tent while standing and using only one hand—the nondominant hand—to produce the name tent. You must keep your dominant hand behind your back. You may not use the desk, table or chair.
 - None of the groups may begin producing name tents until the class is told to begin.
 - When each student finishes folding his or her name tent, he or she should raise a hand.
 - Students will be timed and will have a maximum of two minutes to make the name tent.
4. Draw the following table on the board and use this to tally students who raise their hands upon completing the name tent.

Time	Group 1	Group 2	Group 3	Group 4
30 seconds				
60 seconds				
90 seconds				
120 seconds				

5. Distribute a piece of construction paper to each student. Remind them that students in each group must fold name tents according to the rules described and that they are to raise their hands individually when they have finished their name tents. Tell students they may begin. As students raise their hands, record tallies on the board next to the appropriate group number and time segment. If students raise their hands at a time beyond 30 seconds, place the tally mark in the 60-seconds row. If they raise their hand beyond 60 seconds, place the tally mark in the 90-seconds row and so on.
6. After two minutes, ask everyone to stop producing name tents and discuss the following:
- Did any students find it very difficult to produce name tents? (*students in Group 4*) Why? (*Standing and folding with one hand—the nondominant hand—made it nearly impossible.*)

- Ask students in each group what difficulties they encountered making the name tents? (*Group 1: hard to fold with one hand, very hard to fold using only nondominant hand, difficult to write with nondominant hand; Group 2: hard to fold with one hand; Group 3: few difficulties; Group 4: hard to fold with one hand, very hard to fold with nondominant hand, very, very hard to fold standing up and difficult to write with nondominant hand*)
 - In general, which group of students finished most quickly? (*Group 3*) Why? (*Students in this group were able to use both hands and were able to remain seated.*)
 - In general, which group of students took the longest time to finish? (*Group 4*) Why? (*Students in this group had to use only the nondominant hand and had to stand.*)
7. Explain that this activity can be used to introduce the concept of human capital. Human capital is the knowledge, talent, experience, and skills that people possess. Point out that people are able to invest in their human capital by going to school, pursuing additional training and developing skills.
 8. Explain that the process of managing income includes saving and investing for the future. An important investment that students make in their future is their investment in human capital—their efforts to acquire and improve their knowledge, talent, experience, and skills.
 9. Ask the students how finishing name tents more quickly and producing name tents that are of higher quality might relate to investment in human capital. (*Answers will vary, but students might recognize that people with more skills, education and training tend to be more productive.*)
 10. Explain that people with more skills, education and training tend to be more productive, and, as a result, earn higher incomes. In the name tent activity, Group 4 represents those with the smallest investment in human capital—high school dropouts. Thus, they are constrained the most in completing the task representing the reduced amount of education and skills. Group 1 represents those who graduate from high school. Group 2 represents those who pursue additional training following high school—associate’s degrees, bachelor’s degrees or trade school. Group 3 represents those who pursue advanced degrees. They had the fewest constraints in pursuing the task to represent having more skills and education.
 11. Explain that people develop human capital throughout life. Learning to read and compute are examples. Discuss the following and record student examples on the board:
 - Give examples of the human capital you possess—that is, the skills, talents and education that you have now. (*read, write, compute, play piano, play chess, draw, use various woodworking tools, ability to use a computer, ability to work with others, and so on*)

- What investments did/do you make to develop and maintain this human capital? (*practiced reading, completed math homework, practiced piano, joined the chess club, attended a special art class, attended a computer class, made furniture and other wood items, and so on*)
 - If you want to own your own business in the future, what human capital might you need? (*management skills, accounting skills, computer skills, communication skills, etc.*)
 - What investments might you make to develop this human capital? (*pursue a college degree in business or accounting, read professional journals, shadow someone who owns a business, etc.*)
12. Distribute a copy of *Handout 1: Educational Attainment, Income and Unemployment Data* to each student. Ask students to work in pairs. Each pair should write two sentences—one describing the relationship between median income and educational attainment. The other sentence should describe the relationship between unemployment and educational attainment. Ask pairs of students to share their statements. (*Answers might include: There is a direct relationship between educational attainment and income. The more education people acquire, the higher their weekly income. There is an indirect relationship between unemployment and educational attainment. The higher the level of educational attainment the lower the percent of unemployment.*)
 13. Using a computer and projector, display the *Occupational Outlook Handbook* at www.bls.gov/ooh/. (Note: If computers are available have pairs of students look up the OOH.)
 14. Point out that due to a variety of supply and demand factors, the type of post-secondary education you pursue matters as well. Some types of degrees or programs may make it easier for someone to find a job and may translate to higher salaries. For example, engineers are likely to earn high salaries and find employment more readily than some others. Those who pursue training as plumbers and electricians may also find work more easily and may earn higher incomes. Ask the students for evidence of this from the *Occupational Outlook Handbook*.
 15. Point out that the income data are given as median income rather than average or mean income. Discuss the following:
 - What is the difference between median and mean? (*Students should explain that mean is an average. All terms are added and the sum is divided by the number of terms. Median is the middle number. It is found by placing the terms on a scale from lowest value to highest value, then finding the middle value.*)
 - Why does it matter? (*Average income can be skewed by one outlier number in a very dramatic way. The median income would not be dramatically affected by a single outlier number and is generally favored by economists when looking at groups of numbers, particularly income, where a small number of high earners can skew the number upward.*) Note: Clarification is provided below.

- Assume that you were calculating the average and median incomes for full time students who have not graduated from high school yet and whose incomes are not very high and vary.
 - Assume that there are seven students in the group with incomes ranging in \$1,000 increments from \$1,000 to \$7,000. To calculate the average or mean you must add the income of all the people and divide by the number of people in the group. $(\$1,000 + \$2,000 + \$3,000 + \$4,000 + \$5,000 + \$6,000 + \$7,000) \div 7 = \$4,000$
 - To find the median, you should put the numbers in order of value from lowest to highest and pick the middle number. \$1,000, \$2,000, \$3,000, \$4,000, \$5,000, \$6,000, \$7,000
 - In this case \$4,000 is the middle number. In our example \$4,000 is both the mean and median, so why should we care which number gets used? Let's add one person to the group. A father of one of the students who is a doctor earning \$150,000 per year.
 - The calculation for average or mean income now looks like this: $(\$1,000 + \$2,000 + \$3,000 + \$4,000 + \$5,000 + \$6,000 + \$7,000 + 150,000) \div 8 = \$22,250$
 - When we recalculate the average or mean, the average income of the group increased from \$4,000 to \$22,250. While the number is mathematically correct, it might seem misleading to say that the average income of people in the group is \$22,250 because nearly everyone in the group earns far less than that amount.
 - The calculation for median income looks like this: \$1,000, \$2,000, \$3,000, \$4,000, \$5,000, \$6,000, \$7,000, \$150,000
 - To calculate the median when you have two middle numbers, you find the number half-way between them by adding them together and dividing by two. Here the median income is \$4,500. The median income increased from \$4,000 to \$4,500. To say that the median income for this group is \$4,500 seems to be a more accurate reflection of the people in the group than the mean.
16. Explain that part of the art of planning for your financial future includes making a strong investment in your own human capital. Learning about earning and managing income is an investment in human capital.
17. Optional: Distribute new pieces of construction paper to students who were not able to complete their name tents or to students whose name tents were illegible.

Closure

18. Review the key points of this lesson by discussing the following:
 - What is human capital? (*the knowledge, talent, experience, and skills that people have*)
 - What is investment in human capital? (*efforts to acquire and improve human capital*)
 - How do people invest in human capital? (*education, training and practice*)
 - In general, how does investment in human capital—through education—affect income? (*The more education, the greater income people earn.*)

Assessment

19. Ask students to work with a partner to create a chart/graph that represents that data from Handout 1. Distribute chart paper and markers to each pair. Have pairs draw their chart or graph on the chart paper. Beneath the graph ask students to write an explanation of the importance of investment in human capital using the data in the table. Have pairs of students display their charts and share them with the class.
20. Have students review the *Occupational Outlook Handbook* at <http://www.bls.gov/ooh/>. Have them select an occupation in which they are interested, identify the human capital that they currently possess that would be important for this occupation (reading, mathematics, people skills, writing, etc.), and identify investments in human capital that they must make to attain this occupation (additional training and education, computer skills and so on).

Handout 1: Unemployment Rate, Educational Attainment and Median Weekly Earnings in 2012

Directions: Working with a partner, write two sentences—one describing the relationship between median income and educational attainment. The other sentence should describe the relationship between the rate of unemployment and educational attainment.

Unemployment rate in 2012 (Percent)	Educational attainment	Median weekly earnings in 2012 (Dollars)
2.5	Doctoral degree	\$1,624
2.1	Professional degree	1,735
3.5	Master's degree	1,300
4.5	Bachelor's degree	1,056
6.2	Associate degree	785
7.7	Some college, no degree	727
8.3	High-school diploma	652
12.4	Less than a high school diploma	471

Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers.
SOURCE: Bureau of Labor Statistics, Current Population Survey.