

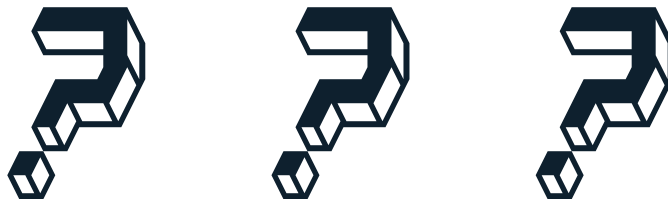
HOW ARE ...

21ST

CENTURY

JOB

DIFFERENT FROM THOSE IN THE PAST?



High School Lesson Plan on the ECONOMICS OF WORK

Time Estimate: 90 minutes



FEDERAL RESERVE BANK of NEW YORK

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Materials

- [Worksheet 1](#): How are 21st century jobs different from those in the past?
- [Worksheet 2](#): Doin' Work
- [Worksheet 3](#): Labor Market Predictions
- [Worksheet 4](#): The Labor Market Puzzle
- [Worksheet 5](#): The Future of Work

- [Resource A](#): Different Measures of Unemployment
<https://www.stlouisfed.org/open-vault/2018/june/unemployment-number-to-watch>
- [Resource B](#): The Labor Force Participation Rate, Explained
<https://www.stlouisfed.org/en/open-vault/2020/august/labor-force-participation-rate-explained>
- [Resource C](#): Headlines (see worksheet on Page 13)
- [Resource D](#): Many Small Businesses in the Services Sector are Unlikely to Reopen
<https://libertystreeteconomics.newyorkfed.org/2021/05/many-small-businesses-in-the-services-sector-are-unlikely-to-reopen/>
- [Resource E](#): Is Work-from-Home Working?
<https://libertystreeteconomics.newyorkfed.org/2023/06/is-work-from-home-working/>
- [Resource F](#): Future of Jobs Report 2023: Up to a Quarter of Jobs Expected to Change in Next Five Years
<https://www.weforum.org/press/2023/04/future-of-jobs-report-2023-up-to-a-quarter-of-jobs-expected-to-change-in-next-five-years>

Answer Key

State Curriculum Standards



Supporting Question 1: How do economists measure work?

Procedures

1. Students begin the lesson by predicting the answer to the compelling question on Worksheet 1: How are 21st century jobs different from those in the past? *Expected response: Answers will vary, but remind students that it's okay if their predictions don't pan out. They will be returning to them at the end of the lesson.*
2. Next, ask students to brainstorm a few ways that they would "measure work." Students can interpret this topic as broadly or narrowly as they want; remind them that this is just a brainstorm activity. Collect the answers on the board. *Expected response: Answers will vary, but may range from productivity measures to unemployment to who is working or why they are working (for a salary/money, to accomplish something).*
3. Explain that to answer the compelling question, students will begin by answering three smaller supporting questions. Point out to students that the first supporting question is the same one they just brainstormed in the previous step: "How do economists measure work?" Tell them that they've generated a prediction on this topic and will return to it at the end of the lesson.
4. Pass out Worksheet 2: Doin' Work. Explain that half of the class will examine the economic term **unemployment**, and the other half will become experts on the topic of **labor force participation**.
5. Half the class will read Resource A: Different Measures of Unemployment from the St. Louis Fed's *Open Vault Blog* and answer questions on the top of Worksheet 2. The other half will read Resource B: The Labor Force Participation Rate, Explained (also from the *Open Vault Blog*) and answer questions on the bottom of Worksheet 2.
6. After students complete their respective reading and questions, pair them with another student who did the same reading and do a check for understanding, with the students reflecting on similarities and differences between their answers. Circulate around the room clarifying any points of confusion.
7. Once the students have reconciled their answers, reshuffle to pair each student with another who read about the other measure of employment. Give students time to teach their partner about their respective indicators.
8. Ask students to compare the answers they've generated on how economists measure work to the predictions they generated in step 2. Note any trends, similarities, and differences with the students, and remind them that predictions are okay to be incorrect and incomplete. Explain to students that part of the learning process is generating a prediction and comparing it with more information, so they can revisit their predictions and reflect on them.
9. Return to Worksheet 1 and ask students to answer the supporting question, "How do economists measure work?"

¹ www.stlouisfed.org/publications/regional-economist/october-2007/trading-barbs-a-primer-on-the-globalization-debate

² Note to teachers: For question 5 on the worksheet, it discusses "What I'm giving up each time I pick up a dish/window." The economics term for "what I'm giving up" would be opportunity cost. For more on opportunity cost and a way to teach this more advanced economic concept, the St. Louis Fed has an explainer on the topic: <https://www.stlouisfed.org/education/economic-lowdown-podcast-series/episode-1-opportunity-cost>



Supporting Question 2: What is the role of education in the workforce?

Procedures

1. Open the lesson by displaying the headlines found on [Resource C](#). Teacher asks students for their reactions, asking them what these news headlines suggest about the current state of the economy. Explain to the students (if they did not already make note of this) that all of the headlines focus on jobs and education. (Note: as the instructor, it may be necessary to find future articles that are current. You can choose to use entirely new headlines, or potentially mix old and new ones and have students reflect on changes in the job market over time.)
2. Ask students to list some of the benefits/costs of college to get them thinking in an economic frame of mind. List the benefits and costs of college for students. *Expected student response: Benefits may include: easier to get a job, more money at your job, learning is important, etc. Students are likely to list lots of costs (tuition, housing, etc), but explain (if students do not identify it themselves) that the biggest cost of college is that they are not working full time. Define **opportunity cost**¹ as the value of the next best alternative that must be given up when scarce resources are used for one purpose instead of another. Explain that the next best alternative to college for most students is full-time employment.*
3. Ask students to make a prediction: based on their knowledge, how do they think the job market for high school graduates compares to the job market for college graduates? Students should write their predictions for the questions on the front of [Worksheet 3: Labor Market Predictions](#). Tell students to keep this prediction nearby, as they will return to it later.
4. Take a moment to teach/review the concepts of each term. Students can define each on [Worksheet 3](#) beneath where they made their predictions.
 - a. **Unemployment**²: the number of people without jobs who are actively seeking work
 - b. **Wages**³: payments for labor services that are directly tied to time worked, or to the number of units of output produced
 - c. **Labor demand**⁴: the amount of demand for labor that an economy or firm is willing to employ at a given point in time
5. To answer the first supporting question, students will be divided into three groups. Using [Worksheet 4: The Labor Market Puzzle](#), explain that students will be trying to piece together the labor market “puzzle” and that each group is responsible for a different piece.
 - a. One group will look at **unemployment**
 - i. Updated statistical information found at <https://www.newyorkfed.org/research/college-labor-market/index> under “Unemployment” tab.
 - b. One group will look at **wages**
 - i. Updated statistical information found at <https://www.newyorkfed.org/research/college-labor-market/index> under the “Wages” tab
 - c. One group will look at **labor demand**
 - i. Updated statistical information found at <https://www.bls.gov/ooh/fastest-growing.htm>
6. Direct all students to their respective source. Students, working in their groups, use the data to complete their “puzzle piece.” Guided questions are provided, scaffolding students to look at the overall data before focusing on how the data explains the labor market.
7. Bring students back together in a think-pair-share, jigsaw, or larger group discussion, where students get information on the other pieces of data to complete the puzzle.
8. Debrief with students, explaining how unemployment, wages, and labor demand all influence the market for high school and college graduates.
9. Students complete the puzzle by completing the question at the bottom to answer the supporting question. The response should pull together from all three data sets: **unemployment** rates, **wages**, and **labor demand**. Students should compare the results with their prediction from prior to the lesson.
10. Returning to [Worksheet 1](#), students complete their answer for supporting question 2, “What is the role of education in the workforce?”

¹ www.econedlink.org/glossary/?glossary=O

² www.econedlink.org/glossary/?glossary=U

³ www.econedlink.org/glossary/?glossary=W

⁴ www.investopedia.com/terms/d/demand_for_labor.asp



Supporting Question 3: How are jobs changing?

Procedures

1. To review key concepts from the previous two days, begin by showing this video from the St. Louis Fed that summarizes key concepts in Unemployment: <https://www.stlouisfed.org/education/economic-lowdown-video-series/episode-10-unemployment>
2. Explain that today students will answer the third supporting question, “How are jobs changing?” Tell students that there are a wide variety of ways that the workforce changes over time, and that today they will look at research about a few key topics. (*Note: this lesson provides three suggested data sources. However, Worksheet 5 uses general questions if the instructor would like to find their own sources.*)
3. Divide the class into three groups. One group will read Resource D: Many Small Businesses in the Services Sector Are Unlikely to Reopen. One group will analyze Resource E: Is Work-from-Home Working?, and one group will be responsible for Resource F: Future of Jobs Report 2023: Up to a Quarter of Jobs Expected to Change in Next Five Years. Once the readings are assigned, divide groups D, E, and F into small groups of three or four who will work together as a team. Distribute Worksheet 5: The Future of Work.
4. Each team should read their assigned resource and answer the questions on Worksheet 5. Circulate around the room and assist any students who are struggling or need clarification.
5. Tell students that they will share their information via a gallery walk. Distribute poster paper and markers to each small group and ask them to transfer their information to the poster paper.
6. Once all posters are ready, hang them around in the room grouped by resource. Provide time for students to collect the information from each poster to complete Worksheet 5.
7. Upon completion, debrief with students, spending time comparing the various job trends they identified. Remind students that there are many more trends in the changing workforce, and these were just three examples.

8. Ask students to return to Worksheet 1 and answer the third supporting question, “How are jobs changing?” using the information they just learned.

Conclusion:

Explain to students that they have answered three different supporting questions, and generated information to help them answer the compelling question. On Worksheet 1, ask students to generate their answer to the compelling question, “How do 21st century jobs differ from those in the past?” using the information they’ve learned



Extension Activity:

The High School Fed Challenge is an educational program that aims to encourage students in grades 9 – 12 to learn more about economics and promote interest in economics as a subject for study and the basis for a career. This academic competition encourages students to work as a team to develop and enhance their skills in critical thinking, creativity, writing, time management, and conducting rigorous research. This experience will prepare students for academic success at the collegiate level and help students build analytical and communications skills for use in their future careers.

This year's theme is the Economics of Work, and students can use the principles that they have learned in this lesson as the basis for their submission.

For rules, eligibility, and more on the High School Fed Challenge please visit our website: nyfed.org/HSFC



Handouts

Materials

- [Worksheet 1](#): How are 21st century jobs different from those in the past?
- [Worksheet 2](#): Doin' Work
- [Worksheet 3](#): Labor Market Predictions
- [Worksheet 4](#): The Labor Market Puzzle
- [Worksheet 5](#): The Future of Work

- [Resource C](#): Headlines

The word "JOBS" is rendered in a large, bold, 3D block font. Each letter is thick and has a white interior, giving it a three-dimensional appearance as if it were a physical object. The letters are dark blue or black on the outside.

 **Worksheet 1:** How are 21st century jobs different from those in the past?

How are **21st CENTURY JOBS** different from those in the past?

PREDICTION:

How do economists measure work?

What is the role of education in the workforce?

How are jobs changing?



RESOURCE A: DIFFERENT MEASURES OF UNEMPLOYMENT

1. What are the three criteria that the U.S. Bureau of Labor Statistics uses to consider someone unemployed?
2. In the examples given in the reading, why are Bob and Karen not considered unemployed?
3. Why do you think economists have different measures of unemployment?

RESOURCE B: THE LABOR FORCE PARTICIPATION RATE

1. Who is included in the labor force?
2. Who is not included in the labor force?
3. What are two factors affecting the labor force participation rate in the United States?



PREDICTION

How do you think the job market for high school graduates compares to the job market for college graduates?

PREDICTION

How would you find the answer?
What information or data would you need?

REFLECTION

Does the labor market data match your original prediction?

If your prediction was correct, what data supported it? If it was incorrect, what data disproved or did not support your hypothesis?

DEFINITIONS AND TERMS

Opportunity Cost: _____

Unemployment: _____

Wages: _____

Labor Demand: _____





Worksheet 4: The Labor Market Puzzle: What is the role of education in the workforce?

Labor Demand

1. What characteristics do you notice that the fastest growing occupations have, according to BLS?
2. What career were you most surprised to see on the list of fastest growing occupations? Why?
3. What predictions would you make about the education requirements for many of the jobs on this list? What does that tell you about the role of education in the workforce?

Wages


1. In general, what do you notice about the difference in wages between someone with a bachelor's degree and someone with a high school diploma?
2. Compare the 25th percentile of college graduate wages (the bottom of the shaded area) to the high school diploma wages. What does this data suggest about the value of a college degree for this group?
3. Based on the data, what long-term economic outcomes can you predict for a student graduating with a high school degree compared to a student graduating with a college degree?

Unemployment

1. What is the general trend in the unemployment rate among all workers since 2010?
2. Compare employment data between "college graduates" and "young workers" (those without a college degree). What does this data suggest about the role of education in the workforce?
3. Based on the data, what (employment or long-term economic) outcomes can you predict for a student graduating with a high school degree compared to a student graduating with a college degree?

Based on wages, unemployment, and labor demand data: **What is the role of education in the workforce?**



 **Worksheet 5: The Future of Work**

What is your topic—in five words or fewer?

What is one piece of data you found interesting?

What surprised you when reading about this topic?

How does your reading demonstrate the future of work?

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What surprised you when reading about this topic?

How does your reading demonstrate the future of work?



New college graduates greeted with best job market since 1953

- Fox Business, May 19, 2023

The class of 2023 is graduating into a challenging job market

- Marketplace, April 5, 2023

More High School Grads Forgo College in Hot Labor Market

- Wall Street Journal, May 29, 2023

Young US College Graduates Face Tougher Job Market Than Average

- Bloomberg, July 30, 2022

Worker shortage was supposed to give people with no college degree opportunity. But has it?

- USA Today, May 10, 2023



How are **21st CENTURY JOBS** different from those in the past?

Answers will vary.

PREDICTION:

Answers will vary.

How do economists measure work?

Answers will vary.

What is the role of education in the workforce?

Answers will vary.

How are jobs changing?

Answers will vary.



RESOURCE A: DIFFERENT MEASURES OF UNEMPLOYMENT

1. What are the three criteria that the U.S. Bureau of Labor Statistics uses to consider someone unemployed?

The unemployed are people who are: jobless, actively seeking work, and available to take a job.

2. In the examples given in the reading, why are Bob and Karen not considered unemployed?

Bob has halted his job search and because he is not actively seeking work is not considered unemployed. Karen is working part-time and even though she would like full-time work she is not counted as unemployed.

3. Why do you think economists have different measures of unemployment?

Answers will vary.

RESOURCE B: THE LABOR FORCE PARTICIPATION RATE

1. Who is included in the labor force?

The employed (whether the job is full-time, part-time, temporary, or year-round) and the unemployed (people who are jobless, have looked for a job in the past four weeks and are available for work).

2. Who is not included in the labor force?

Includes someone who has given up looking for a job, students, retirees, or stay-at-home parents.

3. What are two factors affecting the labor force participation rate in the United States?

The aging workforce (baby boomer generation is retiring) and an increase in educational attainment (people spend more time in school and start careers later).



PREDICTION

How do you think the job market for high school graduates compares to the job market for college graduates?

Answers will vary.

PREDICTION

How would you find the answer?
What information or data would you need?

Answers will vary.

REFLECTION

Does the labor market data match your original prediction?

Answers will vary.

If your prediction was correct, what data supported it? If it was incorrect, what data disproved or did not support your hypothesis?

Answers will vary.

DEFINITIONS AND TERMS

Opportunity Cost: *the value of the next best alternative that must be given up when scarce resources are used for one purpose instead of another*

Unemployment: *the number of people without jobs who are actively seeking work*

Wages: *payments for labor services that are directly tied to time worked, or to the number of units of output produced*

Labor Demand: *the amount of demand for labor that an economy or firm is willing to employ at a given point in time*



Labor Demand

1. What characteristics do you notice that the fastest growing occupations have, according to BLS?

Answers will vary.

2. What career were you most surprised to see on the list of fastest growing occupations? Why?

Answers will vary.

3. What predictions would you make about the education requirements for many of the jobs on this list? What does that tell you about the role of education in the workforce?

Answers will vary.

Wages

1. In general, what do you notice about the difference in wages between someone with a bachelor's degree and someone with a high school diploma?

Wages are consistently higher for those with bachelor's degrees

2. Compare the 25th percentile of college graduate wages (the bottom of the shaded area) to the high school diploma wages. What does this data suggest about the value of a college degree for this group?

Even the lower percentile of college graduates earn more than the wages of those with a high school diploma, suggesting that a college degree still has value even at the lower end of the scale

3. Based on the data, what long-term economic outcomes can you predict for a student graduating with a high school degree compared to a student graduating with a college degree?

Over the long-term the high school diploma wage earner will earn less money

Unemployment

1. What is the general trend in the unemployment rate among all workers since 2010?

Since 2010 unemployment decreased, then increased for all groups during 2020, and has since gone down for all groups and returned almost to what it was prior to 2020 and the sudden large increase in that year

2. Compare employment data between "college graduates" and "young workers" (those without a college degree). What does this data suggest about the role of education in the workforce?

College graduates have lower unemployment rates, suggesting that higher education makes it more likely that one can get a job

3. Based on the data, what (employment or long-term economic) outcomes can you predict for a student graduating with a high school degree compared to a student graduating with a college degree?

Over the long-term, based on the data the student with a college degree is likely to have more job security

Based on wages, unemployment, and labor demand data: **What is the role of education in the workforce?**

Answers will vary.



 **Worksheet 5: The Future of Work** [Answer Key] - *ANSWERS WILL VARY*

What is your topic—in five words or fewer?

What is one piece of data you found interesting?

What surprised you when reading about this topic?

How does your reading demonstrate the future of work?

What is your topic—in five words or fewer?

What is one piece of data you found interesting?

What surprised you when reading about this topic?

How does your reading demonstrate the future of work?

What is your topic—in five words or fewer?

What is one piece of data you found interesting?

What surprised you when reading about this topic?

How does your reading demonstrate the future of work?



State Curriculum Standards

New York

12.E1a: In making economic decisions in any role, individuals should consider the set of opportunities that they have, their resources (e.g. income and wealth), their preferences, and their ethics.

12.E2a: Given that the resources of individuals (and societies) are limited, decisions as to what goods and services will be produced and to whom to sell one's resources are driven by numerous factors, including a desire to derive the maximum benefit from and thus the most efficient allocation of those resources.

12.E3a: As the United States has evolved from an agrarian to an industrial to an information economy, the workplace requires a more highly skilled and educated workforce.

New Jersey

Economics, Innovation and Technology Strand:

- Resources impact what is produced and employment opportunities.
- Societies make decisions about how to produce and distribute goods and services and these decisions are influenced by the control of the means of production.
- The specialization of labor leads to greater efficiency in the means of production and the circular flow of goods and services between markets through a medium of exchange.

Connecticut

D2.Eco.11.9-12: Use economic indicators to analyze the current and future state of the economy.

D4.7.9-12: Assess options for individual and collective action to address local, regional, and global problems by engaging in self-reflection, strategy identification, and complex causal reasoning.

