

Lesson 6: How do households and businesses interact in the exchange of resources and goods/services?

Big Ideas of the Lesson

- The circular flow is a model used by economists to demonstrate how money moves through the economy to facilitate the exchange of resources and goods/services in the marketplace. In its simplest version, the circular flow involves firms and households, which interact in the marketplace.
- Households provide firms with resources (natural, capital, and human) in exchange for salaries, rents, and wages. They exchange these in what is known as the “market for factors of production.”
- Firms use natural, capital, and human resources to produce goods or services. Firms then sell the goods and services to households in exchange for revenue. This exchange occurs in the “market for goods and services.”
- The circular flow model shows the simultaneous roles of producers and consumers in a market economy.

Abstract: This lesson introduces students to the factors of production and the circular flow of goods and services in the national marketplace. Students learn how one part of the cycle affects the entire exchange process. The lesson begins with a quick review about the factors of production. Students then engage in a simulation that represents the circular flow model. Some students act as businesses purchasing resources in the factor market from households and then combine those resources to produce goods and services, which they sell to households in the goods and services market. During the simulation, students experience how the role of entrepreneurs and government regulations affect the circular flow. After each round of the simulation, students debrief how the circular flow functions to move resources and goods and services in an economic system. The lesson concludes with students writing reflectively about their experiences in their Decision Making Notebook.

Content Expectations: E1.1.1; E1.2.1; E1.2.2; E1.2.3; E1.3.3; E1.4.1; E1.4.5; E2.1.1; E2.1.2

Common Core State Standards for Literacy in History/Social Studies: RH.9-10.4; WHST.9-10.4 and 10

Key Concepts: circular flow model, opportunity cost, choice, factors of production

Teacher Notes:

- This lesson requires you to cut out cards that will be distributed to students. All cards are located in the “**Circular Flow Cards**” handout in the *Supplemental Materials (Unit 1, Lesson 4)*. The following amounts of copies are recommended for the simulation:
 - At least 50 natural resources cards
 - At least 50 human resources cards
 - At least 50 capital resources cards
 - At least 50 entrepreneurship cards
 - About 75 good/service cards
 - At least 30 business cards
 - At least 30 household cards
 - At least 75 money cards
- This lesson can be subdivided into three distinct parts: (1) understanding the factors of production and the circular flow model, and (2) engaging in the circular flow simulation, (3) debriefing the simulation. It is recommended that teachers devote a full class period to the simulation itself and debrief the

simulation the day after it is conducted.

- If you have taught the previous lesson in this unit, you may want to use the fracking community as the setting for the circular flow simulation to provide for additional continuity for students.

Lesson Sequence

1. Begin the lesson by reminding students of the famous “I, the Pencil” story from Lesson 5. As a class, make an informal list of all the resources used to manufacture a pencil and post it in a visible place within your classroom. Use the list to remind students of “factors of production.” Remind to students that economists classify resources such as those on the class generated list into categories known collectively as “factors of production.” While all economists agree that natural resources (land), human resources (labor), and capital resources (equipment) are factors of production, some argue about including a fourth category -- entrepreneurship. It may also be interesting to share the fact that economists differ in how they view the factors of production and to probe students’ thoughts about the inclusion of entrepreneurship as a factor of production (could be an entry point into argument).
2. Explain to the class they will engage in an economic simulation to learn about the interrelationships between households and businesses in our economy. Tell students that the simulation they are participating in is really much bigger and more complicated. This model will be used throughout the course and they will continue to add components to this simplified version.
3. Divide the class into households and businesses. Try to assign at least 5 more households than businesses if possible. Households should be composed of single-students and multiple-students. You can either assign students into households or let students choose their own households. Once households are determined, distribute a household card from the “**Circular Flow Cards**,” located in the *Supplemental Materials (Unit 1, Lesson 6)* to each household. Then distribute the rest of the students a business card from the “**Circular Flow Cards**.” Have students affix the cards to their shirts so that they are in plain view to others in the class.
4. Distribute the handouts “**Overview of Households**” and “**Overview of Businesses**,” located in the *Supplemental Materials (Unit 1, Lesson 6)* to students based on their respective roles determined in Step 3. Students should read the instructions silently. While they are reading silently, distribute the resource cards (natural resource, human resource, capital resource) to the households and money to the businesses. **Teacher Note:** To better represent our labor market, it is recommended that you randomly distribute the amount of money to the businesses. Also randomly distribute the type resource cards and the amount of resource cards to the households. To simulate the fact that some households inherit wealth, you may also want to provide some households with money. It is also recommended that the teacher does not tell students of these disparities prior to the simulation.

Be sure that households recognize that they have two objectives during the simulation: (1) they will sell their productive resources (factors of production) -- natural, human and capital -- to the businesses, and (2) they will use the procured money to purchase goods and services from the businesses.

Businesses should recognize that the primary goal is to make a profit. To do this, there are several steps they must take: (1) to acquire two of the three factors of production -- natural, human, and capital resource cards -- from households; (2) to exchange two of the three resource cards for either a good or service card from the teacher. (Students should see that they will be engaging in two distinct transactions during the simulation.); and (3) sell the good or service card to households at a “price” that will ensure that profits are made. Remember, to earn a profit, you must sell the good or service for more than your cost of production.

5. Engage students in Round 1 of the simulation. This round should last 7-10 minutes. To reach their ultimate goal of earning a profit, businesses must first start with the objective of buying resources from the households. The household's objective is to sell resources for income. After 7-10 minutes have elapsed, stop the simulation. **Teacher Note:** This simulation allows for differentiation by the amount of resources and money given to each student. To challenge students, provide fewer resources; to scaffold strugglers, provide them with more resources. However, it is important that through the variety of simulations during the course, the teacher makes sure that students have the opportunity to experience being both economically advantaged and disadvantaged.

Explain to students that the time period of the simulation represented one month of economic activity. Distribute the **“Circular Flow Simulation Ledger,”** located in the *Supplemental Materials (Unit 1, Lesson 6)* to each business and household. (**Teacher Note:** There are different ledgers for households and businesses. It is recommended that the teacher copy these documents back to back. Have students use the appropriate side depending on their role in the simulation.)

After reviewing the handout with the class, have each household and business calculate the money and resources gained and lost during the simulation and record it on their individual ledgers under Round 1.

6. Engage students in a debriefing session of Round 1. Display the **“Class Ledger,”** located in the *Supplemental Materials (Unit 1, Lesson 6)*. As a class, tally the amount of resources bought and the amount of goods and services sold by the businesses. Then tally the amount of resources sold and goods and services bought by households. Record the information on the “Class Ledger.” Have the class use this information to analyze whether households or businesses are doing well. Some suggested questions for students include the following:
- Are the number of resources bought and sold the same? Why or why not? (They should be if the accounting ledger was done properly by each group because it is a closed economy).
 - Who did well in the first round? What did you do?
 - Who did poorly in the first round? Why do you think this is so?
 - Is there an imbalance in the total amount of money in each market? Why might this be? (If there is an imbalance, such as households having a lot more money than businesses, may indicate that households are not buying goods and services (saving) or the businesses are selling goods too cheaply. Likewise, if businesses have a lot of money it would be indicative that households are buying a lot of goods and services or that the households are selling resources too cheaply. This will eventually lead households to be unable to buy goods and services.
 - How can the imbalance be correct? Is there a role for the government here?

Teacher Note: Use a variety of these questions in the debriefing of each round. It is not necessary to ask all of them for each debriefing. Mix it up and do not use all the questions each time.

7. Explain to students that they will engage in another round of the simulation, however, this round will be a little different. Explain that businesses/firms not only have to continue to buy resources from the households, but also must use these resources to make goods and services and then sell them to households. In order to “make” goods and services, business must approach the teacher and trade in two different types of resource cards (human and capital; human and natural; or capital and natural) in exchange for one good or service card. Households must continue to sell resources to the businesses/firms for income, but now must also purchase goods/services from the businesses with the money they earned in the factors market.

In order for households to obtain more resource cards, they must exchange one good/service card for three new resource cards from the teacher: one human card and two other cards (any type of

combination of capital or natural resource cards). Households can only get as many human resource cards as there are eligible worker in their family.

Remind students that they **MUST** use their money cards in the exchange and they cannot trade directly a productive resource for a good or service because this represents how our economy works. Engage students in Round 2 of the simulation for 7-10 minutes.

8. Debrief Round 2 by having student individually tally their results and then tallying up the amounts on the **“Class Ledger”** sheet. Use some of the questions from Step 6 above to discuss the round. Additionally, ask students to consider the number of goods and services bought and sold. For example, are the number of goods and services bought and sold the same? Why or why not? (Again, if they are different, it could be because of poor accounting.)
7. Prior to conducting Round 3, provide entrepreneur cards to some of the households that have done well in the first two rounds. Be sure to explain to the class that one entrepreneur card is worth 2 goods/services cards. Conduct the third round of the simulation for 7-10 minutes. Again, businesses can buy natural, human and capital resources from households in the factors market in exchange for income (money). Households can buy goods and services from businesses in the product market in exchange for money. Business can turn in two resource cards (must be different) or one entrepreneurial card to the teacher for a good/service card; Households can turn in 1 goods/services card to the teacher in exchange for more resource cards.
8. After the round, have students tally their results on their individual ledgers. Again, debrief the round by tallying up the amounts on the **“Class Ledger”** sheet. Use some of the questions from Step 6 above to discuss the round. Guide students to recognize that there is an imbalance in the amount of goods and services that households are able to buy. Ask students what the government may be able to do to correct the situation. If students do not suggest it, ask students what they think will happen in the following situations:
 - Should households get a stimulus? What would happen?
 - Should the government raise taxes on businesses to pay for the stimulus?
 - Should the government set a minimum wage for labor to increase the amount of money that households can earn?
 - Should the government keep its hands off the economy? Why or why not?
 - What would happen if household can no longer afford to purchase any goods or services because of the imbalance?
9. Prior to Round 4, the teacher should decide on implementing some “government intervention” in the economy by stimulating or regulating economic growth. The teacher can do this by either taxing or providing subsidies/tax breaks to firm and households. Additionally, holding back on giving out natural resource cards will reflect the depletion of finite resources. See when students notice. Allow both businesses and households to improvise and make up their own rules during this round. Have students engage in the simulation for 7-10 minutes.
10. After the round, have students tally their results on their individual ledgers. Again, debrief the round by tallying up the amounts on the **“Class Ledger”** sheet. Use some of the questions from Step 6 above to discuss the round.
11. Display the **“Lesson Graphic Organizer,”** (Circular Flow Diagram) located in the *Supplemental Materials (Lesson 6, Unit 1)*. Use the diagram to explain how the circular flow works, using students’ experiences from the simulation. Be sure to point out the following:

- Firms go into the “market for factors of production” (factors market) to exchange money for land, labor and/or capital.
 - Households sell land, labor and capital to businesses in the factors market in exchange for money in the form of wages, rents and profits.
 - Businesses combine land, labor and capital to make goods and services. They sell those goods and services to households in the “market for goods and services.” Businesses receive revenue in the form of money in exchange for goods and services.
 - Households use money earned in the factors market to purchase goods or services in the “market for goods and services.”
 - There are two distinct “markets” – the factors market and the goods and services market. These markets work simultaneously to facilitate the exchange of resources and goods and services.
12. Conclude the lesson by having each student write reflectively in their Decision Making Notebook in response to the following questions:
- How well did your household or firm do in the simulation?
 - What would you do differently next time?
 - How did your performance change over the course of the rounds? To what do you attribute any change?
 - Based on what you know about how the economy works, do you think this simulation accurately reflects it? Why or why not?
 - What suggestions do you have for improving the simulation?

Resource Section

Content Expectations:

- E1.1.1:* Scarcity, Choice, Opportunity Costs, and Comparative Advantage – Using examples, explain how scarcity, choice, opportunity costs affect decisions that households, businesses, and governments make in the market place and explain how comparative advantage creates gains from trade.
- E1.2.1:* Business Structures – Compare and contrast the functions and constraints facing economic institutions including small and large businesses, labor unions, banks, and households.
- E1.2.2:* Price in the Market – Analyze how prices send signals and provide incentives to buyers and sellers in a competitive market.
- E1.2.3:* Investment, Productivity and Growth – Analyze the role investments in physical (e.g., technology) and human capital (e.g., education) play in increasing productivity and how these influence the market.
- E1.3.3:* Price, Equilibrium, Elasticity, and Incentives – Analyze how prices change through the interaction of buyers and sellers in a market including the role of supply, demand, equilibrium, elasticity, and explain how incentives (monetary and non-monetary) affect choices of households and economic organizations.
- E1.4.1:* Public Policy and the Market – Analyze the impact of a change in public policy (such as an increase in the minimum wage, a new tax policy, or a change in interest rates) on consumers, producers, workers, savers, and investors.

- E1.4.5:* Economic Incentives and Government – Identify and explain how monetary and non-monetary incentives affect government officials and voters and explain how government policies affect the behavior of various people including consumers, savers, investors, workers, and producers.
- E2.1.1:* Income – Describe how individuals and businesses earn income by selling productive resources.
- E2.1.2:* Circular Flow and the National Economy – Using the concept of circular flow, analyze the roles of and the relationships between households, business firms, financial institutions, and government and nongovernment agencies in the economy of the United States.

Common Core State Standards for Literacy in History/Social Studies:

- RH.9-10.4:* Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social science.
- WHST.9-10.4:* Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- WHST.9-10.10:* Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Instructional Resources

Equipment/Manipulative

Computer and projector
Decision Making Notebook

Student Resource

Gustafson, Kathryn, Brian Pierce and Scott Warrow. *Supplemental Materials (Lesson 6, Unit 1)*. Teacher-made materials. Oakland Schools, 2014.

Teacher Resource

Gustafson, Kathryn, Brian Pierce and Scott Warrow. *Supplemental Materials (Lesson 6, Unit 1)*. Teacher-made materials. Oakland Schools, 2014.