



Circular Flow

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Standards and Benchmarks (see page 21)

Lesson Description

In this lesson, students participate in a simulation of the basic economic relationships in a market economy as demonstrated by the circular flow model. They will interact as households and businesses in the marketplace as they simulate transactions in the market for resources and the market for goods and services. They will also gain knowledge of the incentives for consumers to earn income, for businesses to earn profit, and the role of money in the economy.

Concepts

Circular flow of goods and services

Productive resources (natural resources/land, human resources/labor, and capital resources/capital goods)

Resource payments (wages and salaries, rent, interest, and profit)

Role of money

Objectives

Students will be able to

- define productive resources (human resources, natural resources, and capital resources);
- identify the type of income earned by each resource (wages or salaries, rent, or interest);
- analyze the economic relationships between households and businesses in a market economy;
- identify and describe the role of government in the circular flow model; and
- use the circular flow diagram to illustrate economic relationships among households, businesses, and government.

Compelling Question

How do people interact in markets?

Time Required

60 minutes to conduct and debrief the simulation; 45 minutes to complete the infographic activity and discuss.

Materials

- *“Circular Flow” PowerPoint slide deck, Slides 1–12*
- *Handout 1 one copy for teacher as reference*
- *Handout 2, enough copies cut apart for each student representing a business (i.e., one-half of the class) to receive one badge*
- *Handout 3, one copy cut apart to provide 10 one-hundred-dollar bills for each student representing a business (i.e., one-half of the class)*



- *Handout 4, enough copies cut apart to create sets (five natural resources cards, five human resources cards, five capital resources cards) for each student representing a household (i.e., one-half of the class), with each resource-card type (page) copied on a different color of paper (e.g., blue, green, or yellow) to make transactions and exchanges easier. NOTE: Shuffle these cards before the start of the lesson so that no one student receives an original set from the handout.*
- *Handout 5, enough copies cut apart to provide one product card for each set of three resource cards. Multiply the number of students representing a household (two-thirds of the class) by five. NOTE: These do not need to be kept in sets.)*
- *Handout 6, four copies on card stock display these as pricing guides in several locations in the room.*
- *A large piece of paper or table tent that says “FACTORY”.*
- *Tape*
- *Handout 7, one copy for each student*
- *Handout 7 Answer Key for the teacher*
- *Handout 8, one copy for each student*
- *Handout 8 Answer Key for the teacher*
- *[Circular Flow infographic](#), one copy for the class, one copy for each student or pair of students, or internet access and a projector to show the infographic.*

Preparation

Prior to the start of the simulation, place the FACTORY sign (or table tent) and product cards (from Handout 5) in the area where businesses will exchange resource cards for product cards.

Post the Pricing Guides (from Handout 6) in various locations in the room.

Clear an area of the room of desks so that households and businesses have space to meet.

Procedure

Day 1

1. Explain that the class will participate in a simulation of a market economy to learn how businesses and households interact in markets. The simulation is a demonstration of an economic model—the circular flow of the economy. In the simulation, some students will act as households and others will act as businesses.
2. Divide the class into roughly one-half businesses and one-half households. Give each student representing a business a badge from *Handout 2: Business Badges* and 10 \$100 bills from *Handout 3: \$100 Bills*. Have these students affix the business badge to their clothing with tape so that it will be visible during the simulation.
3. Display Slides 2-3 and explain that in our economy, people in households own productive resources. Define **productive resources** as the natural, human, and capital resources that are available to make goods and services. Productive resources are also called **factors of production**. Explain the following:
 - People in households own productive resources.
 - People are paid; that is, they earn income for providing productive resources in the marketplace.



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- Households own their **human resources**—their labor which they provide to businesses in exchange for a wage or salary.
 - Households (people) are entrepreneurs. Entrepreneurs are a special type of human resource. They own and operate businesses in exchange for profit.
 - Households own **natural resources** are things that occur naturally in or on the earth, such as land, oil, and trees which they provide in exchange for rent.
 - Households provide capital resources. **Capital resources** are things produced by people and used to produce other goods and services. **They are also called capital goods.** Capital resources are things like buildings, equipment, and tools. Households have savings which businesses can borrow (through banks). Households receive a payment called interest.
4. Give each household 15 resource cards from *Handout 4: Resource Cards*.
Note: These cards should be shuffled so that no one student has a complete original set; that is, five human resources cards, five natural resources cards, and five capital resources cards.
 5. Display Slide 4. Explain that the simulation will be conducted in two rounds. Explain the following:
 - In Round 1, the goal for students representing businesses is to be as productive as possible and buy as many resources as possible to produce as many eagle toys as possible.
 - To produce one eagle toy, a business needs three resource cards: one unit each of natural resources, human resources, and capital resources.
 - At the end of Round 1, the businesses will take the sets of three resource cards to the factory to be “made” into eagle toys. They will simply exchange each set of three resource cards for one eagle toy.
 - In Round 1, the goal for students representing households—and their only job—is to sell their resources for as much money as possible.
 6. Point out the pricing guides (*Handout 6: Pricing Guide*) posted in the room and tell students to use them as a reference for potential pricing options in Round 1. Explain that they must use only the \$100 bills and that businesses are unable to make change.
 7. Emphasize that households may not give away resources or combine resources with other households. Resources may only be sold to businesses.
 8. Point out that students can refer to Slide 4 throughout the round to remind them of the household and business goals for the round.
 9. Conduct Round 1. Allow students 5-8 minutes to trade.
 10. After the simulation, ask the businesses to bring their exact sets of resource cards to the factory to be made into eagle toys (cards from *Handout 5: Product Cards*). Exchange the sets for eagle toys.
 11. Have students return to their seats and discuss the following.
 - Businesses, how many eagle toys did you produce? (*Answers will vary.*)
 - Households, how much money did you earn from the sale of your resources? (*Answers will vary.*)
 - Households, do you have any resources that went unsold? (*Answers will vary.*)
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12. Redisplay Slide 4 and remind students of the goals for businesses and households in Round 1.
13. Display Slide 5 and review the circular flow using the diagram on the slide as follows. Point out that “firms” is another word for businesses.
 - Businesses just bought resources from households in the resource market, which is also called the market for factors of production.
 - Households earned **income** for selling their productive resources (factors of production).
 - What types of resources did households sell? (*Human resources [labor], natural resources, and capital resources [capital goods]*).
 - The income households earned from the sale of resources includes wages/salaries for providing human resources; interest for providing capital resources; and rent for providing natural resources.
 - Cashiers at a grocery store provide their human resource (labor) and exchange earn wages which is their income.
 - A restaurant pays rent for the use of land for the restaurant. That rent is income for the landowner.
 - The restaurant owner takes a loan from a bank to buy equipment and supplies. They pay interest on the loan, which is income for those who have savings at the bank.
 - Who were the buyers and sellers in this round? (*Households were sellers—they were selling resources. Businesses were the buyers—they were buying resources.*)
14. Display Slide 6 and explain the goals and instructions for businesses and households for Round 2:
 - Businesses are to sell eagle toys to the households and try to make as much money as possible.
 - Households are to buy as many eagle toys as possible with the income they earned from selling their resources in Round 1.
 - If households have resources left from Round 1, they may sell them to businesses.
 - Businesses may buy these resources and bring exact sets of three—one natural resource card, one human resource card, and one capital resource card to the factory to turn into products—eagle toys.
 - Businesses may sell these eagle toys.
15. Refer students to the pricing guides posted in the room and tell them to use this as a reference for potential pricing options in Round 2. Remind student that both households and businesses are unable to make change with their \$100 bills. Point out that students can refer to the slide to remind them of the household and business goals for this round.
16. Conduct Round 2. Allow students 5-8 minutes to trade.
17. After the simulation, display Slide 7 and discuss the circular flow.
 - In this round households bought goods—eagle toys—from the businesses in the product market.
 - Households paid for these toys with money—the income they earned in Round 1.
 - Businesses received money for selling their eagle toys to households. The money businesses receive for selling goods and services is called **revenue**.
 - When you shop at the grocery store, you buy goods, and the grocery store receives payment from you—that payment is revenue for the grocery store.



- When you buy a ticket to see a movie or a concert, the business provides entertainment and receives revenue as payment.
 - Households, how many eagle toys did you buy? (*Answers will vary.*)
 - Households, how did you pay for the eagle toys? (*With the income earned in Round 1*)
 - Businesses, how much revenue did you receive? (*Answers will vary.*)
 - Who were the buyers and sellers in this round? (*Households were the buyers—they were buying eagle toys. Businesses were the sellers—they were selling eagle toys.*)
18. Distribute a copy of *Handout 7: Graphic Organizer of the Circular Flow Diagram* to each student. Allow students to work in pairs to complete the graphic organizer.
19. Display Slide 8. Call on students to answer questions about the circular flow diagram. Use the Handout 7 answer key found in the “Circular Flow Handout and Assessment Answer Key” to assess student responses.
- What are the two markets in the circular flow? (*Product Market and Resource Market*)
 - From home what market do households go to first? (*Resource Market*)
 - What do households provide in this market? (*Natural, human, and capital resources*)
 - What do households receive in exchange for their resources? (*Income—wages, rent, interest*)
 - Who buys the resources? (*Businesses*)
 - Why do businesses buy resources? (*To produce goods and services*)
 - What do businesses do with the goods and services they produce? (*Sell them*)
 - In what market do businesses sell goods and services? (*Product*)
 - What do businesses receive in exchange for the goods and services they sell? (*Revenue*)
 - What numbers represent the flow of money in the economy—income; wages, rent, interest; spending, and revenue. (*2, 4, 5, and 7*)
 - What numbers show the flow of resources and goods and services? (*1, 3, 6, and 8*)

Day 2

20. Remind students of the circular flow activity from the previous class. Project, distribute, or show the *Circular Flow* infographic.
21. Review the first block (“The Circular Flow Model”), which shows a circular flow of productive resources (factors of production), goods and services, and money payments. Discuss the following:
- What are the two sectors in this circular flow? (*Households and Businesses or firms*)
 - What are the two markets? (*Product and Resource*)
 - In which market are households sellers? (*Resource market*)
 - In which market are businesses the sellers? (*Product market*)
 - In which market are households the buyers? (*Product market*)
 - In which market are businesses the buyers? (*Resource market*)
22. Review the second block (“Resource Market / Product Market”), which shows the components of the two markets and discuss the following.



Note: Although there wasn't an entrepreneurship card in the simulation, entrepreneurs were introduced on Slide 2 and businesses in the simulation represented entrepreneurial activity.

23. Ask students how the circular flow model on the infographic relates to the simulation they participated in? *(Students who represented businesses obtained productive resources—[human resources [labor], natural resources [land], and capital resources [capital goods]] from households through the resource market in exchange for money [income]. Businesses exchanged resource cards for product cards, which represented producing goods. Businesses sold products to households through the product market in exchange for money [revenue].)*
24. Point out that the model with only two sectors—households and firms/businesses is called the simple circular flow. When we add government, the model has three sectors and becomes a bit more complicated. Review the third block (“Government in the Circular Flow”) and discuss the role of government in the circular flow as follows.
- Transfer payments are government payments that people receive without performing productive services; that is, without producing goods and services. Transfer payments make up a large proportion of the federal budget and include Social Security, Medicare and Medicaid, government employee retirement benefits, unemployment compensation, and public assistance such as food stamps.
 - What are some productive resources that households sell to government? *(Answers will vary, but one example is teachers working in public schools selling their human resources, or labor. Another is certified public accountants [CPA] working for the IRS.)*
 - What are some goods and services that businesses sell to government? *(Answers will vary but may include computers, airplanes, or accounting services.)*
 - What are some public goods and services that government provides to households in exchange for money payments, mainly taxes? *(Answers will vary but may include public schools, police and fire departments, libraries, or roads.)*
 - What are some goods and services that government provides to businesses in exchange for money payments? *(Answers will vary but may include police and fire protection, highways, air-traffic control services, or disaster relief.)*
25. Review the fourth block (“Money Flows/Flows to and from Government”) and further discuss the role of government in the circular flow.
- What payments do households earn from businesses for selling their labor in the resource market? *(Households earn income as wages and salaries when they sell their labor to businesses.)*
 - What payments do households receive from businesses for lending money for capital purchases in the resource market? *(Households earn interest when they lend money to businesses for capital purchases.)*
 - What payments do households receive from businesses for the use of their natural resources (land) in the resource market? *(Households receive rent when businesses use their natural resources (land) in the production process.)*
 - What payments do households receive for their entrepreneurial activity in the resource market? *(Households make profit as entrepreneurs when their business revenue exceeds their costs.)*
 - What money do businesses receive in the product market when they sell their goods and services to households? *(Businesses receive revenue for the sale of their goods and services to households in the product market.)*



- What payment do households and businesses make to government? (*Taxes*)
- What payments does government make to businesses without receiving any resources, goods, or services in exchange? (*Subsidies*)
- Examples of subsidies that government provides to business firms include support to farmers or for scientific research.
- What payments does government make to households without receiving any resources, goods, or services in exchange? (*Transfer payments*)
- Name some examples of transfer payments. (*Medicare and Medicaid, government employee retirement benefits, unemployment compensation, and public assistance such as food stamps*)
- How is the simple circular flow model (only households and businesses) similar to or different from the model that includes government? (*Answers will vary but may include that, generally, money payments flow among households, businesses, and government in exchange for resources, goods, and services but that transfer payments and subsidies are money payments that flow from government to households and businesses without a reciprocal flow of labor resources, goods, or services.*)

Note: If you've covered GDP previously, use the last section of the infographic to review that content. If you haven't, save this section until you are covering GDP.

26. Explain that in the United States economic activity is organized around private markets where the prices for goods and services are determined by buyers and sellers interacting in those markets.

Closure

27. Display Slides 9-11. Reveal one question at a time and discuss the following to review the key content in the lesson.
- What are productive resources? (*natural, human, and capital resources that are available to make goods and services*)
 - Who sells productive resources in the circular flow of the economy? (*Households*)
 - What are the three types of productive resources? (*Human resources, natural resources, and capital resources*)
 - What type of income is earned by each resource? (*Human resources: wages or salaries; natural resources: rent; and capital resources: interest*)
 - Who buys resources in the resource market? (*Businesses*)
 - Why do businesses buy resources? (*To produce goods and services*)
 - Who buys goods and services in the product market? (*Households*)
 - What payment do businesses receive for selling goods and services? (*Revenue*)
 - What is the role of government in the circular flow? (*Government collects taxes from households and businesses; government provides some goods; government buys some goods and services*)
 - How are transfer payments and subsidies different from payments in the resource and product markets? (*Transfer payments and subsidies are money payments that flow from government to households and businesses without a reciprocal flow of labor resources, goods, or services.*)

Assessment

28. Distribute a copy of *Handout 8: Assessment* to each student (or allow students to work in pairs). Allow time for students to work and then discuss their answers using the "Circular Flow Handout and Assessment Answer Key."



Handout 1: Teacher Reference

Households and Businesses in the Circular Flow

Overview

The Role of Households (Individuals and Families)

- Individuals are both consumers and producers. In the U.S. economy, households are consumers when they purchase goods and services from businesses. These exchanges take place in the *product market*. An example is buying a slice of pizza from a local pizzeria.
 - Individuals are producers when they supply productive resources to businesses, which pay for the resources and use the resources to produce goods and services. These exchanges take place in the *resource market*, or *the market for the factors of production*. Examples include the wages paid to the workers at a pizzeria, rent paid to landowners, and payments for or interest paid on loans for capital resources, such as the building where the pizzeria is located or a pizza oven.
- Businesses use three categories of productive resources to produce goods and services: human resources (or labor), natural resources (also known as land), and capital resources (also known as capital goods). Entrepreneurship is also a productive resource, or factor of production. Entrepreneurs are a special type of human resource. Entrepreneurs are the people who take risks and organize the factors of production to start a business; the payment they receive is called *profit*.
 - **Natural resources**, or land, include all productive inputs provided by nature, such as trees, water, oil and mineral deposits, and undeveloped land. The payment to households in the resource market for the use of land is called rent.
 - **Human resources, or labor**, is the work of employees who possess human capital, which is the knowledge and skills that workers earn through education, experience, and training. The payment to households in the resource market for selling labor is called wages or salaries.
 - **Capital resources or capital goods** include all human-made goods used in the production of other goods and services, such as buildings, machinery, and equipment.

The Role of Businesses (Also Called Firms)

- As with households, businesses are both consumers and producers. Businesses supply goods and services in the *product market*. Businesses are also buyers and consumers of productive resources (human resources, natural resources, and capital resources) used to produce goods and services in the *resource market*, or *the market for the factors of production*. Businesses are able to make a profit when they sell their goods and services at a price that is higher than their cost of production. If businesses supply goods and services that are not desired by consumers or sell goods and services below the cost of production, they will incur a loss. Continued losses may result in a firm going out of business.



Handout 2: Business Badges

Business

Business

Business

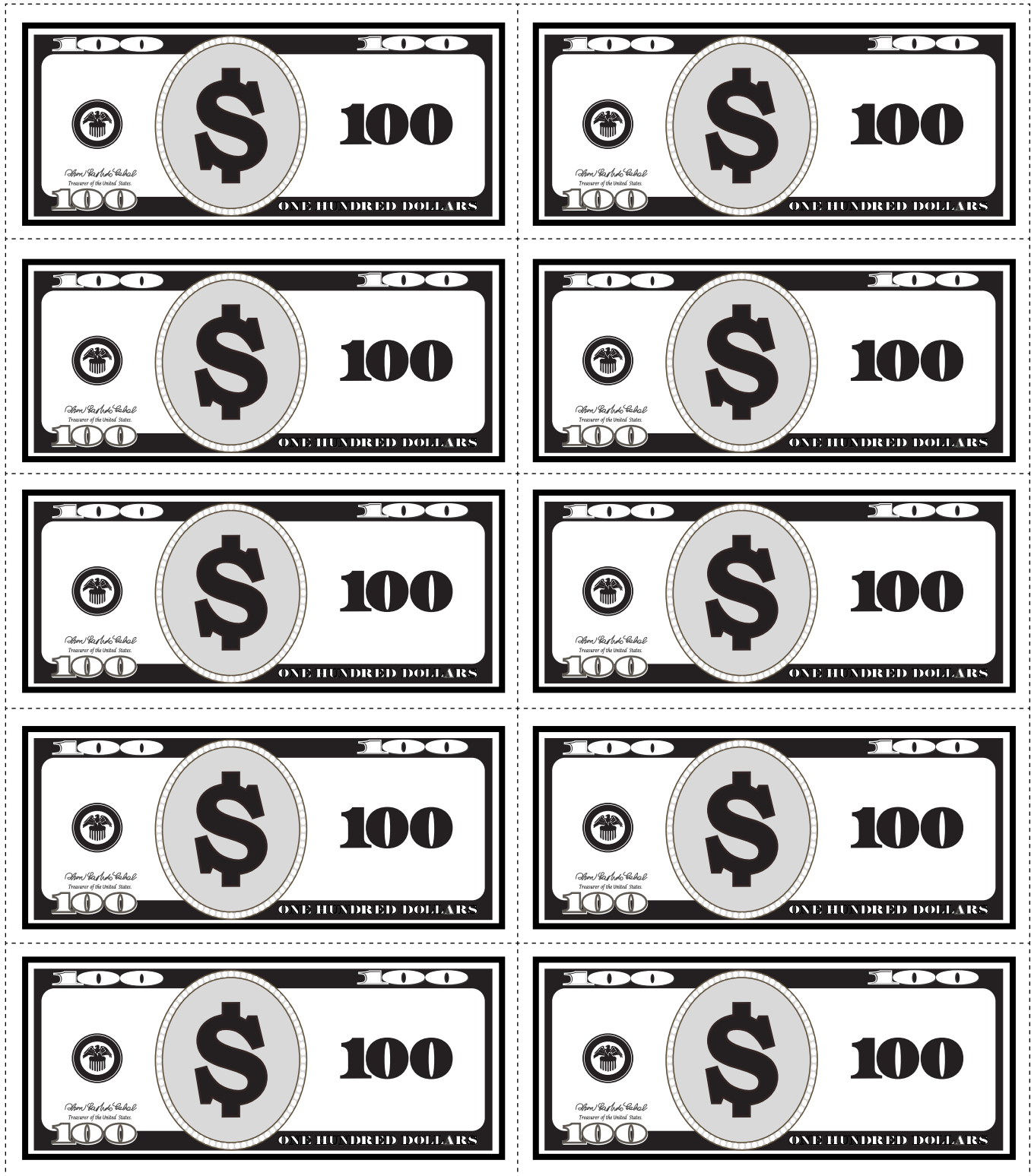
Business

Business

Business



Handout 3: \$100 Bills





Handout 4: Resource Cards (page 1 of 3)

**1 Unit of
Human Resources**

**1 Unit of
Human Resources**

**1 Unit of
Human Resources**

**1 Unit of
Human Resources**

**1 Unit of
Human Resources**

**1 Unit of
Human Resources**

**1 Unit of
Human Resources**

**1 Unit of
Human Resources**

**1 Unit of
Human Resources**

**1 Unit of
Human Resources**



Handout 4: Resource Cards (page 2 of 3)

**1 Unit of
Natural Resources**

**1 Unit of
Natural Resources**

**1 Unit of
Natural Resources**

**1 Unit of
Natural Resources**

**1 Unit of
Natural Resources**

**1 Unit of
Natural Resources**

**1 Unit of
Natural Resources**

**1 Unit of
Natural Resources**

**1 Unit of
Natural Resources**

**1 Unit of
Natural Resources**



Handout 4: Resource Cards (page 3 of 3)

**1 Unit of
Capital Resources**

**1 Unit of
Capital Resources**

**1 Unit of
Capital Resources**

**1 Unit of
Capital Resources**

**1 Unit of
Capital Resources**

**1 Unit of
Capital Resources**

**1 Unit of
Capital Resources**

**1 Unit of
Capital Resources**

**1 Unit of
Capital Resources**

**1 Unit of
Capital Resources**



Handout 5: Product Cards

Product



Product



Product



Product



Product



Product



Product



Product



Product



Product





Handout 6: Pricing Guide

Resource Cards	Eagle Toys
1 Resource card = \$100.00 (1 for \$100.00)	1 Eagle toy = \$100.00 (1 for \$100.00)
2 Resource cards = \$100.00 (\$50.00 each)	2 Eagle toys = \$100.00 (\$50.00 each)
3 Resource cards = \$100.00 (\$33.33 each)	3 Eagle toys = \$100.00 (\$33.33 each)
4 Resource cards = \$100.00 (\$25.00 each)	4 Eagle toys = \$100.00 \$25.00 each)
5 Resource cards = \$100.00 (\$20.00 each)	5 Eagle toys = \$100.00 (\$20.00 each)
6 Resource cards = \$100.00 (\$16.66 each)	6 Eagle toys = \$100.00 (\$16.66 each)
7 Resource cards = \$100.00 (\$14.28 each)	7 Eagle toys = \$100.00 (\$14.28 each)
8 Resource cards = \$100.00 (\$12.50 each)	8 Eagle toys = \$100.00 (\$12.50 each)
9 Resource cards = \$100.00 (\$11.11 each)	9 Eagle toys = \$100.00 (\$11.11 each)
10 Resource cards = \$100.00 (\$10.00 each)	10 Eagle toys = \$100.00 (\$10.00 each)
11 Resource cards = \$100.00 (\$9.09 each)	11 Eagle toys = \$100.00 (\$9.09 each)
12 Resource cards = \$100.00 (\$8.33 each)	12 Eagle toys = \$100.00 (\$8.33 each)



Handout 7: Graphic Organizer of the Circular Flow Diagram (page 1 of 2)

Name: _____

Directions: Use the word bank below to complete the sentences in the first section below. Some words will be used more than once.

Capital	Product	Productive Resources
Human	Resource	Wages
Income	Natural	Interest
Product	Revenue	Rent

What are the two markets in the circular flow? _____ and _____

Start at home. From there you go to the _____ market.

You take with you your own _____, _____, and _____, resources which we call factors of production or _____.

You exchange these resources for money—your income.

That is, a business pays _____, _____, and _____ for your _____ and uses them to make goods or services.

Then businesses sell goods and services in the _____ market. Households pay money for the good or service in the product market. This payment is _____ for businesses.

Households consume the goods and services they buy.



Handout 7: Graphic Organizer of the Circular Flow Diagram (page 2 of 2)

Directions: Use the word bank to fill in the blanks below to label the diagram. Some words will be used more than once.

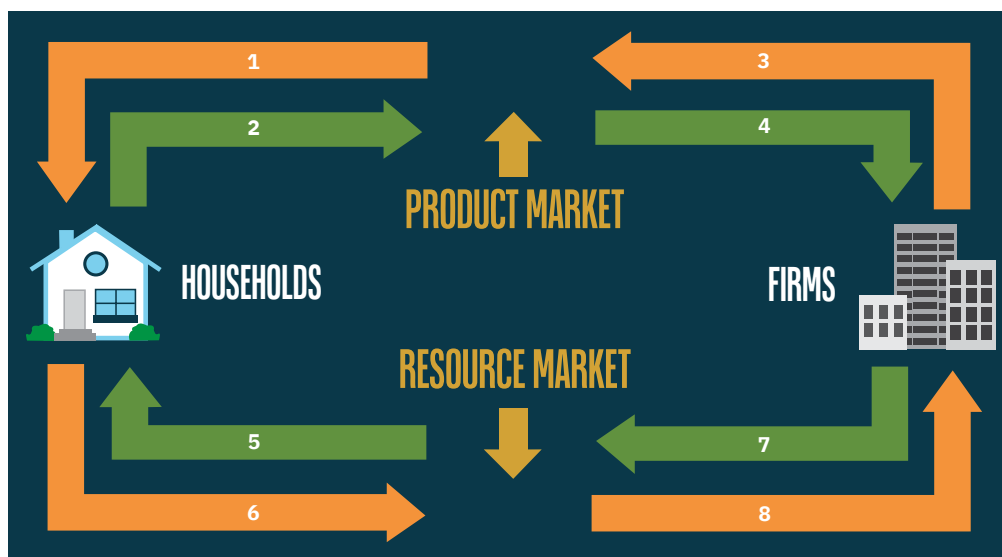
Productive resources/Factors of production	Money (spending)
Goods and services	Money (interest, rent, wages)
Money (income)	Money (revenue)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Directions: Answer the questions below.

What do the green arrows represent?

What do the orange arrows represent?





Handout 8: Assessment (page 1 of 3)

Name: _____

Part A For each of the scenarios below:

- Identify the role of the person—either buyer or seller.
- Identify whether the person represents the household sector or the business sector.
- Identify whether transaction took place in the resource market or the product market.
- Identify what the money is—spending; revenue; or income.

1. Swooshy Sports sells a soccer ball to Trinity. What can you tell about the transaction?

- Trinity was the _____ of the soccer ball in the _____ market.
- Trinity is part of the _____ sector.
- The money used in this transaction was paid to the _____ sector.
- The money used in this transaction is _____ for the business.

2. Jayson owns a rural property where he grows pine trees and sells them to Big Paper Company. What can you tell about the transaction?

- Trees are a natural resource. Jayson is the _____ of the trees in the _____ market.
- Jayson is part of the _____ sector.
- The money used in this transaction was paid to the _____ sector.
- The money Jayson was paid is his _____.



Handout 8: Assessment (page 2 of 3)

Part B For each of the scenarios below:

- Identify the market—resource OR product.
 - Identify the productive resource—natural, human, or capital.
 - Identify the income payment received—wages, rent, or interest.
3. Shayla has her own business selling tacos at a stand in a local park. For her taco stand, she grows tomatoes in a small garden plot she rents from a man named Jack.
- a. Shayla rents her garden plot in the _____ market.
 - b. The garden plot is a _____ resource.
 - c. The payment Jack receives for the garden plot is _____.
 - d. Shayla sells her tacos in the _____ market.
4. Show Me Productions Inc. just announced a big hit show will play at the Grand Theater in July. Alec works at the snack bar inside the theater and says he can help you buy tickets to the show.
- a. Show Me Productions Inc. will sell tickets to you in the _____.
 - b. Alec is an example of a _____ resource.
 - c. Show Me Productions pays Alec _____.



Handout 8: Assessment (page 3 of 3)

Part C: Use the word bank to complete the sentences. Each word is used only once.

Subsidies	Taxes	Resources
Public goods and services	Resource	
Transfer payments	Product	

- 5. _____ are government payments that people receive without performing productive services; that is, without producing goods and services.
- 6. Government provides _____ to households in exchange for money payments. These money payments are primarily _____.
- 7. _____ are government payments that businesses receive without providing goods and services.
- 8. Government buys _____ in the _____ market and buys goods and services in the _____ market.



Standards and Benchmarks

Voluntary National Content Standards in Economics

Standard 7: Markets and Prices

A market exists when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.

- **Benchmarks: Grade 8**

1. Market prices are determined through the buying and selling decisions made by buyers and sellers.

Standard 18: Economic Fluctuations

Fluctuations in a nation's overall levels of income, employment, and prices are determined by the interaction of spending and production decisions made by all households, firms, government agencies, and others in the economy. Recessions occur when overall levels of income and employment decline.

- **Benchmarks: Grade 8**

5. When consumers make purchases, goods and services are transferred from businesses to households in exchange for money payments. That money is used by businesses to pay for productive resources (natural, human, and capital). Governments also provide goods and services that are paid for with tax receipts.
6. One person's spending is other people's income. Consequently, an initial change in spending (consumption, investment, government, or net exports) usually results in a larger change in national levels of income, spending, and output.